

FICTION
MODEL
BUILDING
FACT

"I FLIPPED MYSELF DIZZY--FOR A RECORD!" *See Page 6*

FLYING ACES

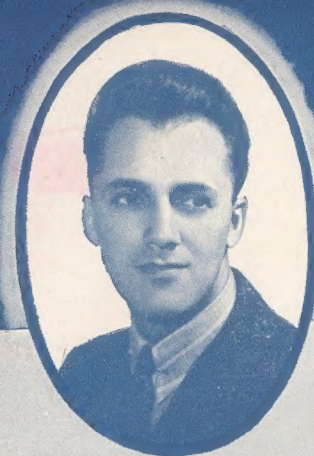
OCTOBER
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THE RED-JAP WAR BEGINS !

AUGUST SCHENBURG

"THEY SOLVED THEIR PUZZLES WITH PLANES" .. YOUTH NEWS .. FEATURES
ACE-HIGH FICTION--DICK KNIGHT, CRASH CARRINGER, AND PHINEAS
MODELS: CUB COUPE, "PETREL" GAS SHIP .. BIG REVIEW OF NATIONALS



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Bob Wright



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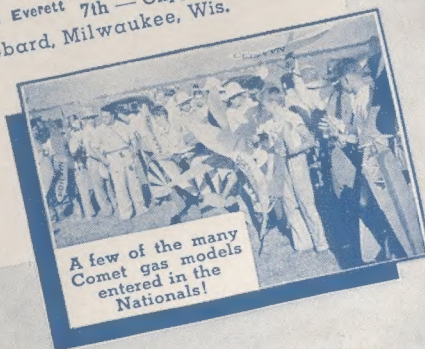
- 1st—Clipper—Roy Roush, Ferndale, Michigan
- 4th—Zipper—M. Spector, Cincinnati.
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- 9th—Zipper—Oliver Pfeil, San Antonio, Texas.
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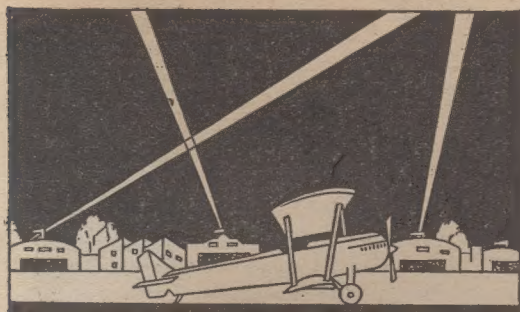
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FICTION FANS!

We've got two action-packed sky novelets in this issue for you—"Fighters That Time Forgot" and "Death Strafes the Desert." Well, after you've read 'em, fellows, we want you to let us know which one you like best. So when next you pick up your pen to shoot us a question, to write Clint Randall, or to ask for an Airmail Pal, let's have your vote on those yarns, huh?

FLYING ACES

A. A. WYN, *Publisher*

DAVE COOKE, *Associate Editor*

HERB POWELL, *Editor*

VOLUME XXXIII

OCTOBER, 1939

NUMBER 3

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Fighters That

ANOTHER ACTION-PACKED DICK KNIGHT ADVENTURE

By Donald E. Keyhoe

Author of "Wings of the Black Eagle,"
"Flight of the Phantoms," etc.

Illustrated by Jon L. Blummer

CHAPTER I

A PAGE FROM THE PAST

WHEN the car was within half a block of him, Richard Knight saw the headlights blink. He stepped from the shadows, with a careful glance around, as the car slowed at the curb. In less than two seconds he was inside, and the roadster was darting ahead along the causeway that led into downtown Miami.

"You're thirty minutes late, Lothario," he said to the chunky Irishman who sat at the wheel, a cigar clamped between his teeth. "Which was it—blonde or brunette?"

"It was a dirty lug with a blackjack," growled Lothario Doyle. "See if anybody's tailin' us." And he swung into Biscayne Boulevard, then made a right turn.

"We seem to be unattended," said Knight. He lighted a cigarette. "This blackjack matter—business or pleasure?"

"I'm tellin' you I've had no time for th' ladies," retorted Doyle. "Hell's been popping. But maybe it's a good thing; for now those guys back in Washington won't have so much time for tryin' to round you up."

"The reward still stands, then?" queried Knight.

"Yeah, dammit," said Doyle. He looked sidewise around his crooked nose, and Knight met his gaze with a whimsical smile. And then Dick said:

Doyle jammed on the brakes, and Knight rose from his seat and gave an exclamation of horror. Dangling by the neck under the outboard nacelles of the giant Boeing Clipper—were two limp bodies!

"Don't worry, Lothario—I'm getting accustomed to being a man with a price on his head. I didn't expect General Brett to be able to clear me so soon—and as long as he and Benita know I'm not a traitor I can stand hiding out a while longer. Let's forget that—from your message, I judge some spy-mob must have you on the jump again."

"They're not spies," muttered Doyle. "It's somethin' else—and one of th' queerest things I ever heard of. Hear those extra papers?"

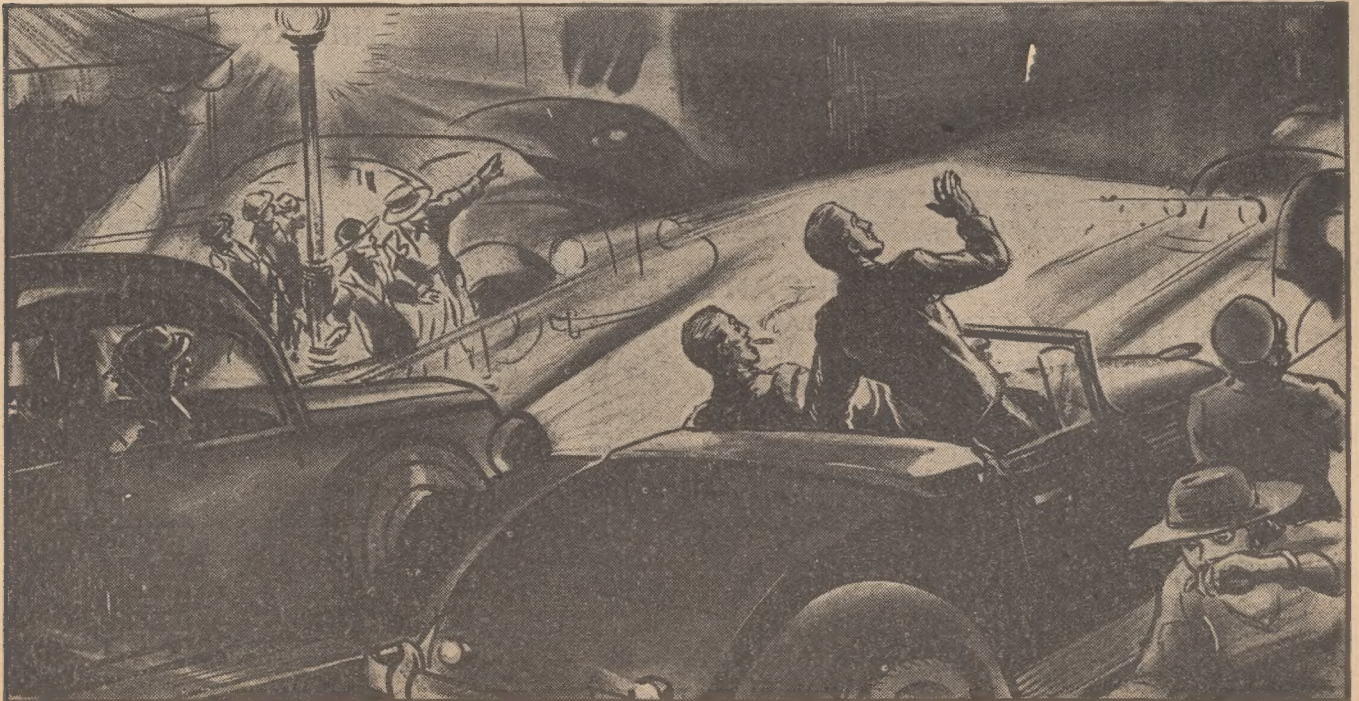
Knight looked out. A newsboy was waving a scare-head paper, shouting something. But the fugitive agent could not catch the words, for a sudden droning roar rose above all other sounds. Traffic ahead came to an abrupt stop. Doyle jammed on his brakes, jarring the cigar from his mouth, and in the same instant a brilliant glow from the sky lit up the cross-street.

Knight stared up, saw a giant Boeing Clipper twisting ponderously away from a parachute flare which had been released near it. As the huge ship swung closer, he gave an exclamation of horror.

Dangling by the neck under the outboard nacelles were two limp bodies!

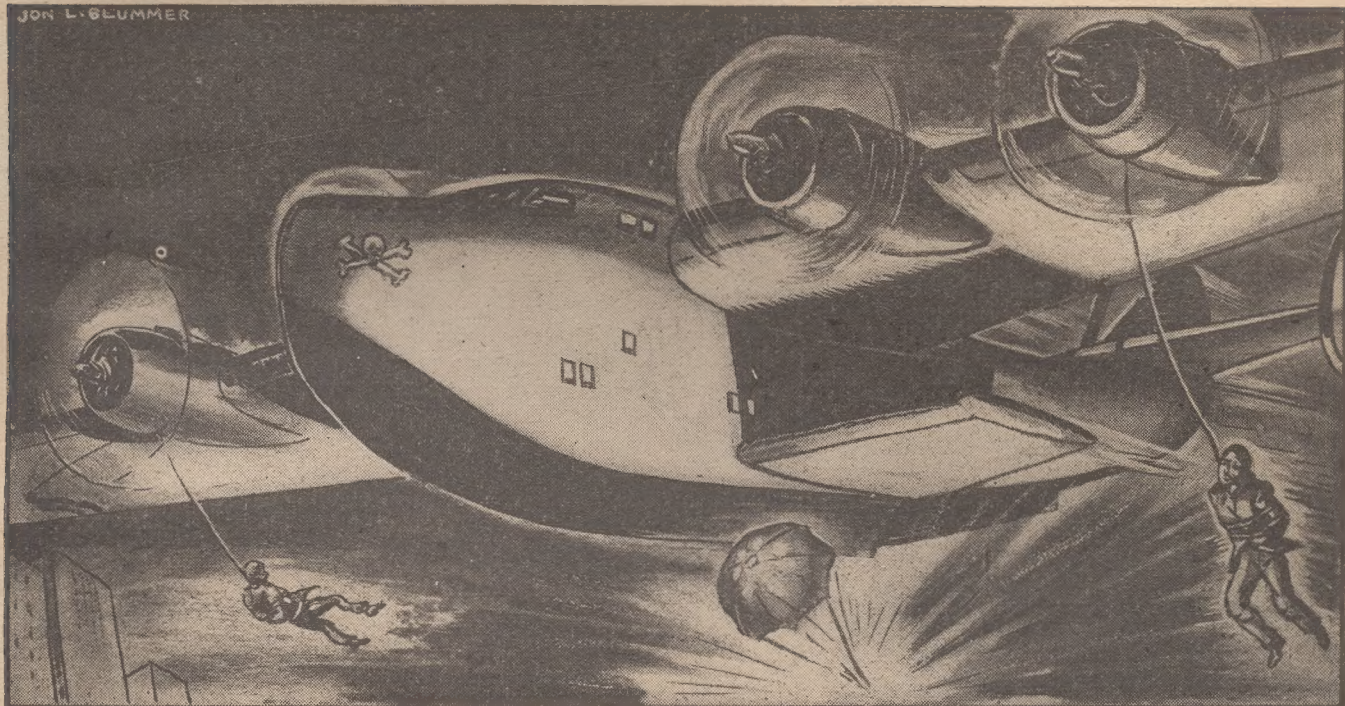
ACRY went up from the sickened onlookers in the street. Knight watched, transfixed, as the ship banked around toward Biscayne Bay. Buffeted by the wind, the two corpses twisted and turned on the ropes which held them to the ship. Their hands were apparently tied behind their backs, but their legs jerked to and fro in a manner terribly suggestive of men dying upon a gibbet.

For a moment, spellbound by this hideous sight, Knight failed to note the grim emblem on the bow. Then



Time Forgot

JON L. SLUMMER



he saw it—an enormous skull-and-cross-bones painted against the somber gray of the hull.

"It's the Pirate Plane!" screeched the newsboy. "Look—a Navy guy's just come after it!"

Wings shining in the light, a Vought Corsair was plunging past the flare, straight for the monster ship. Doyle suddenly threw the coupe in reverse, made a wild turn with wheels half on the sidewalk, and raced down an alley in the direction of the bay.

"Pirates!" Knight said amazedly. "But it's impossible!"

"You saw th' ship, didn't you?" Doyle said in a grim voice. "It's what I was goin' to tell you about—but those two stiff's hangin' under there is a new one."

"How long have you known?" Knight demanded.

"About a week," said Doyle. He held down the horn button as they emerged from the alley, but the boulevard traffic was hopelessly snarled, with motorists abandoning their cars, filling the street to gaze up at the two planes that were flying low above the city's buildings.

Tracer lines abruptly smoked across from the side of the pirate ship, flicked up at the diving Corsair. The two-seater whipped aside, and its first burst went wide of the Clipper's tail. The huge flying-boat banked around toward the Atlantic, but a blast from the Corsair's rear guns drove it into another turn. By now, a second machine-gun was flaming from the Clipper's cabin, and the Corsair was forced into a swift dive under the hull. Just as it pulled up into a chandelle, a chorus of screams went up from the crowd.

Tumbling over and over, a figure fell from the pirate ship.

Knight had a glimpse of another figure leaning out from the after hatch, then both the Clipper's guns swerved wildly to catch the falling man.

"Good Lord, he hasn't got a chute!" groaned Doyle. "What are they firing for—he's surely goin' to die anyway."

"Come on," Knight said swiftly. He jumped from the car, threaded his way through the tangled traffic with Doyle at his heels. The doomed man plunged through the top of a tree in the park across the boulevard, came crashing through the limbs to a stop with a sickening thud.

"Have we got to do this?" Doyle said thickly. His battered face was a greenish color.

"The poor devil must have had something on him they wanted to destroy," Knight answered. "From what I saw, it looked as though he was trying to throw something out and then fell when that other man tried to grab it."

"There comes th' Corsair!" exclaimed Doyle. "What're th' fools tryin' to do?"

Twenty-one years before, the "Cyclops" had mysteriously disappeared—had utterly vanished as though it had been swept from the face of our planet. The strange fate of that Navy collier had never been solved, nor had a single one of its wretched crew ever been traced. And even that grim "flying gallows" which now roared over night-lighted Miami would not have offered a clue to that hellish web of the past—had not Richard Knight seen three dead men rather than two!

Wings screaming, the two-seater plunged on past the Clipper, its nose pointed down steeply at the crowded boulevard. Suddenly the cowl-guns blazed, and a hail of lead struck into the spectators along the edge of the park. A dozen men and women fell to the ground, and the rest of the crowd, converted instantly into an hysterical mob, fled screaming away from the park.

"Th' murderin' butchers!" howled Doyle. "Those Corsair flyers are part of that gang o' cut-throats. Th' fight was a fake. But what're they tryin'—"

"Get under that tree!" Knight ordered. "They're coming back."

The Corsair had zoomed to let go another parachute flare. While the Clipper, now two thousand feet above the street, sprayed a long-range fusillade along the wide avenue, the two-seater roared down for another furious blast at the border of the park. A torrent of cupro-slugs hissed through the trees, tore up the ground within twenty feet of where Knight and Doyle crouched.

"Now!" Knight said swiftly, as the Corsair zoomed again. He and Doyle ran to the crumpled figure from the Clipper. The trees, though breaking the man's fall, had torn half the clothes from his body. Knight could see from the curious position of his head that he had broken his neck when he hit the ground. By the glow of the descending flare, the dead man's bruised and ghastly face was starkly revealed. It was the face of a man in his sixties, with a matted gray beard and mustache. On his twisted right arm was tattooed an American flag, and under it the initials "J. F. J."

His tattered uniform coat, once white, was that of a chief petty officer in the United States Navy. The quartermaster insignia on his sleeve was faded to a leaden gray, and the brass buttons were green with verdigris. Knight made a hasty search of the coat and trousers, found only a rusty clasp-knife.

"Look, there's something caught on that branch," said Doyle. Knight reached up, retrieved a torn canvas sack to which a rusty bolt had been tied. One side of the sack had been slit crookedly, and part of a yellowed paper showed through the gap. It cracked as Knight pulled it out, and he could tell that the yellowness came from age. It was a page from a ship's log, and several words had been scrawled in pencil along the right margin. They read—

"For heaven's sake, come and save us from—"

HERE THE MESSAGE ended, where the page had been jaggedly cut by whatever had gashed the sack. Knight's eyes flicked up to the print at the top, when he saw the faded words he went rigid.

*U.S.S. Cyclops, en rou—
March 7, 1918, Longi—*

"The Cyclops!" Doyle said hoarsely. "Why, she was given up for lost twenty-one years ago!"

For a second the two men stared at each other, oblivious of the two ships roaring overhead. Suddenly a flash of something white made Knight turn. A parachute was swaying down toward the park, tilting to miss the trees as the man underneath pulled on the shrouds.

"One of the Corsair crew bailed out," Knight exclaimed. "Quick, get back out of sight—then we'll try to nab him. Let him get the sack. If we jump him right away, he might escape."

The Corsair came down in another bellowing dive, its nose whipping from side to side as the pilot strove to keep the area clear. Most of his bursts went into the abandoned cars, and within a moment three or four of them were in flames.

By this time the flare had struck and gone out, but the light from the burning machines plainly revealed the man in the chute. With a daring slip at the last moment, he cleared one tree and hooked the chute on the branches of another, so that it collapsed without dragging him as he landed. Flinging off the harness, he ran toward the

spot where the C.P.O.'s body had struck. He found it almost at once, started to search it, then pounced on the message sack. He was frantically pawing inside it when Knight stepped from behind a tree, his automatic lifted.

"Get your hands up," Knight rapped.

The pilot spun around, made a frenzied motion toward the inside of his leather jacket. Then he saw the gun, and his hands slowly went up. As the fugitive agent took a step closer, a look of dismay flashed into the other man's eyes.

"Knight!" he gasped. "I thought you—"

He chopped the sentence off, stood glaring at the two men. Knight's eyes narrowed. The voice had seemed vaguely familiar, but to the best of his knowledge he had never seen that fierce, bony face, with its deep-sunken eyes and flaring nostrils.

"Well?" he said sharply. "You thought what?"

The man was silent, his jaw set like a rock. Knight nodded to Doyle. "Search him, and watch out for a trick."

Working from one side, Doyle hurriedly obeyed. Above the drone of engines came a new note, and a sudden increase in the muffled pound of machine-guns. Knight rammed his gun against the captive's chest, cast a quick glance skyward. A Coast Guard amphibian, a Douglas RD-4, was charging down at the pirate Clipper, with a machine-gun in its nose hammering the flying-boat's tail. The Corsair was zooming into the fight.

The sight of the corpses still dangling under the Clipper's wings aroused a cold fury in Knight. He drove the muzzle of his gun savagely against the captive's ribs.

"Talk fast, before I let my finger slip! Who's flying that Clipper?"

The man stared down at the gun. "I—I don't know," he mumbled. "I was paid only to fly in the Corsair."

"Where'd you get that ship?" grated Knight. "How do you know who I am?"

"I stole the Corsair," moaned the captive. "And I—I saw your pictures—somewhere—can't remember—"

"You'll remember plenty before I'm through with you," Knight looked at the assortment of objects Doyle had taken from the man. They included a small but vicious-looking foreign pistol, a folded map, a wallet, and some cigarettes.

"Let's see the map," Knight said quickly. "And keep the gun and the wallet."

He was about to unfold the map, with Doyle covering the captive, when the howl of enraged voices became audible. At least two hundred men and women had left their temporary shelter, now that the fight had shifted over the bay, and were running toward the park.

"They're after this killer devil!" Doyle yelled.

The prisoner turned deathly pale. "Don't let them get me!" he cried. "I'll do anything—"

"The docks!" snapped Knight. "But one crooked move and I'll let them have you."

WITH THE SHOUTS of the mob rising behind them, they raced across the park toward the yacht basin. Five or six men ran to intercept them. Doyle fired a shot into the air, and the men scattered wildly.

"Covering them would have been enough!" Knight said grimly. "Now that mob behind will think we're in with the pirates no matter what we say."

The captive plucked frantically at his arm. "The second landing—there is a fast boat near the end—ready to go!"

"So you had it all doped out in case you were forced down!" Knight rasped. "All right, step on it!"

There was a small group of boatmen at the foot of the landing, but they dispersed as they saw the guns. With shouts of "Police!" and "Help!" ringing out behind

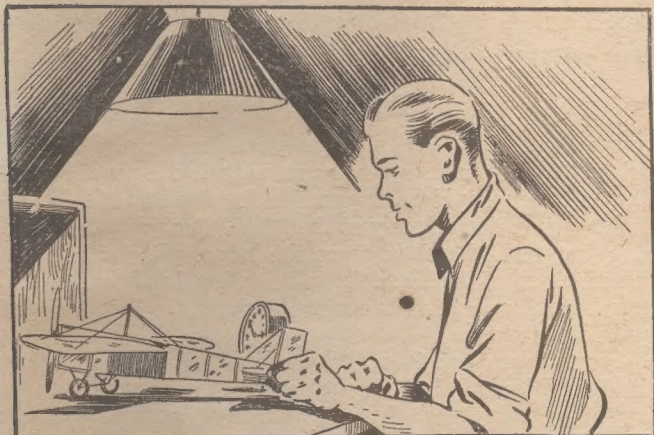
(Continued on page 52)



They Had What It Takes

XXXIII—ARCH WHITEHOUSE—SKYFIGHTER-WRITER

By ALDEN McWILLIAMS



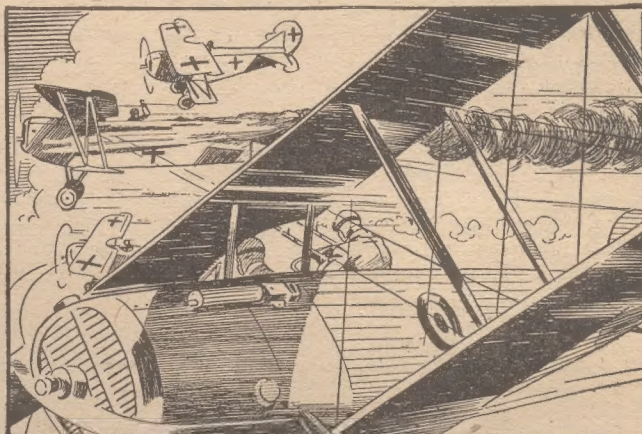
1—Born in Northampton Eng., in 1895, Arthur "Arch" Whitehouse came here with his parents when he was nine. At fourteen, family financial hardships forced him to leave school to sell papers in Newark. A 1910 air race attracted him to making models which he tried to fly with clockworks. Then he nearly got a ride in a Bleriot—but it wouldn't take off.



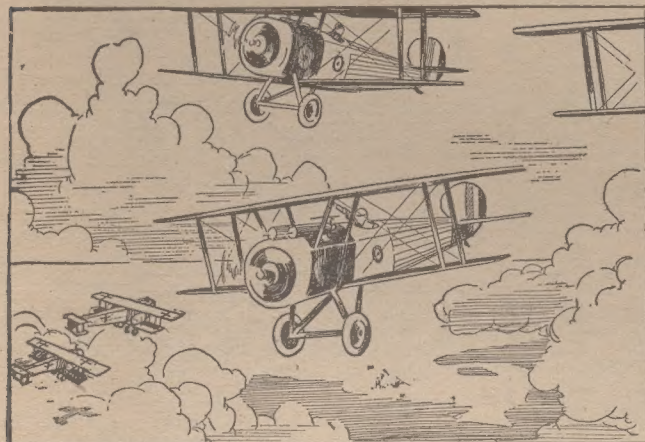
2—Later Arch built and flew a hang-glider of his own design. Then when war broke out in '14 he quit his current job of helper in Thomas A. Edison's laboratory and worked his way to England on a cattle boat. On the way over the crew mutinied and Arch only escaped with his life. He landed by sliding down a hawser at Liverpool—and joined a cavalry outfit.



3—Being handy with a rifle he was soon put in the machine gun school. Then it was France and action! But Arch quickly decided that trench warfare wasn't so swell and he found himself envying the airmen. So he pulled wires to get transferred to the Royal Flying Corps. It was not until late 1916, however, that young Whitehouse got his "break."



4—Sent to No. 22 Squadron as a gunner on F.E.2.B pushers, he chalked up a victory on his very first "show." Again and again he scored. And at one time he acted as Flight Commander, though then only a Corporal. Later, in a Bristol Fighter, Arch and his pilot were sent crashing by von Richthofen—but only after they'd downed three of the Baron's tail men!



5—Arch was wounded in 1917 . . . came back to fly bombing missions over Cambrai . . . next led a big warplane formation into a 70-plane dogfight with a German Circus, an action in which his outfit downed 23 Jerry jobs! Then came training on Camels at Cranwell while quartered with the present King of England. Finally, he commanded many North Sea sky patrols.



6—Credited with 16 victories, Lieutenant Whitehouse received the British Military Medal. After his return to the States, he quickly won a new success as a popular author drawing upon the authentic background provided by his skyfighting experiences. His first air yarn appeared in FLYING ACES more than ten years ago—and he's been an F. A. writing Ace ever since.



"I Flipped Myself

A sensational new glider-looping record! That's what the intrepid Don Stevens GAVE that San Diego Fair audience. But what he TOOK to do it—was plenty! Black-outs, frost bites, fire, choking smoke, and the nose-twitching aroma of fish—among other things!

By Don Stevens

As Told to P. Hawley-Jensen

IT ALL HAPPENED a couple of years ago when San Diego was running its Fair. The exposition people, always on the lookout for novel attractions, had asked my friend Gus Briegleb to bring over his glider and whirl off a world's official glider-looping record. You see, there wasn't one at the time.

Well, Gus had an okay ship, all right—a new utility glider of his own design which had been stressed for stunting and airplane towing. But what he didn't have then was a commercial glider pilot's license entitling him to perform that kind of work. So he asked me if I'd like the job.

"Sure!" I grinned, not stopping to consider what I was in for. And before you could say "angle of incidence" we were on our way out to Mines Field to scout out a tow pilot with an airplane that could climb to at least 16,000 feet.

Luck was with us. We were fortunate in meeting Earl Ortman, renowned sky racer and holder of a slew of speed records. He agreed to tow me, pointing out that since his Waco F-2 cockpit job was fitted with a super-charger it would climb to the necessary height without any trouble. The following Saturday would be the day, and 11 A.M. the hour.

Before leaving Los Angeles, we bought a five pound smoke bomb which we strapped on a strut under the left wing. This I was to ignite as soon as I commenced looping, since it would be impossible for the officials to follow my gyrations clearly at the 16,000-foot altitude without the smoke bomb to trace the loops. We got William Van Dusen, of the N. A. A., to be on hand to tabulate the number of loops, and being a glider devotee, he complied with enthusiasm.

Everything was in readiness that Saturday morning in San Diego. I had donned woolen underwear, three sweaters, two pairs of pants and socks, as well as a fur lined "monkey suit" which weighed twenty pounds. I also sported a thick fur-lined helmet and the necessary pair of goggles.

But darned if I didn't lack a pair of gloves. And this small item, forgotten in the rush of preparation, was fated to be nearly my undoing. Sure, I sent all over Lindbergh Field trying to borrow a pair—but with no success.

The ship was all set to go, the crowd was waiting—but now where was Ortman? He was supposed to arrive at 10:45. As he was quite over-due, Briegleb and I were afraid something had happened to him, and the fair officials were becoming impatient, since they had other doings that had to go on. We all kept glancing skyward, hoping to spot him.

Well, finally, when we were ready to call it all off, we sighted the missing Waco-flying Earl about 10,000 feet up. And when he landed he explained he'd simply wanted

to test his ship on the way down from Los Angeles to see if it would climb to 16,000 feet. It seems she made it with ease—but it took him twenty minutes in descending to keep from cracking a cylinder.

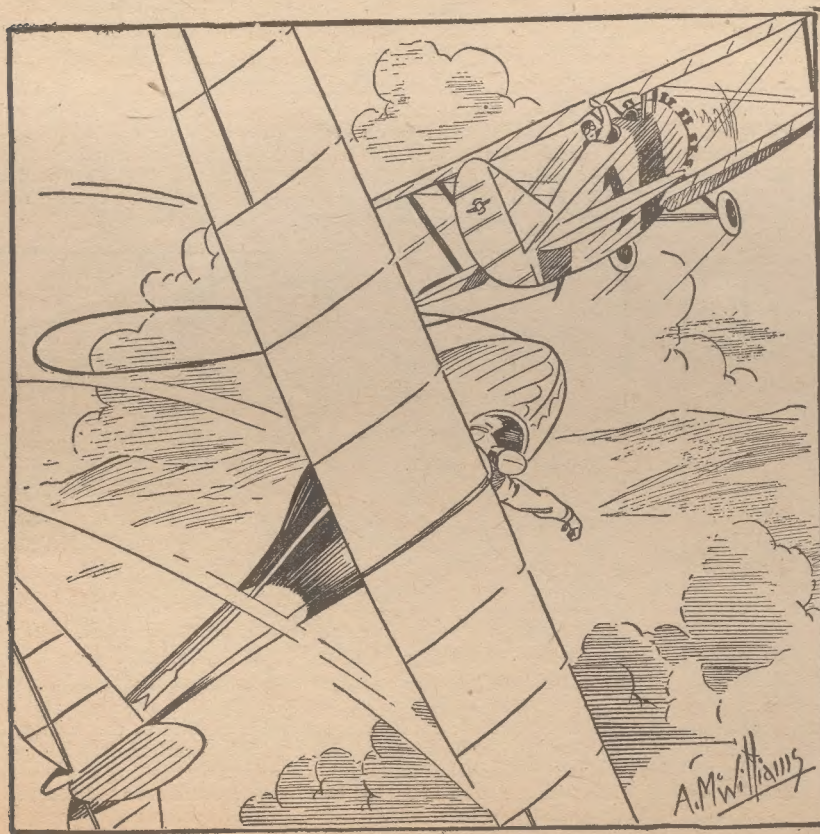
I touched one of the Waco's wing struts. It was like an icicle, and I kicked myself for being without gloves. I asked Ortman if he had an extra pair, but he didn't.

AS ORTMAN thawed himself out over a cup of coffee, we discussed the most favorable location to gain our altitude and decided the air over the bay would be the smoothest. As soon as Ortman reached 16,000 feet, he'd waggle his wings as a sign for me to cut loose.

While he refueled, I slung on my parachute and climbed into the glider. Boy, what a tight fit it was! I had never been in this ship before, and now I discovered that with the bulk of clothes I was wearing and the parachute, there was no more room to spare than there is in a can full of beans!

I strapped the safety belt, tried the con-

"Groggier and groggier I grew from lack of oxygen. Then I thought I heard something at my wingtip. I jerked my head to look around—and went 'out' like a match in a rain barrel!"



Dizzy—For a Record!"

trols, and finding they worked very easily decided this was a bus that would be excellent for looping. Briegleb had run some wires from a small battery—wires which I now discovered I had to have between my legs. They led to the smoke bomb. All I had to do when the proper height was gained was pull a switch and the bomb would merrily spout away.

"Everything's all set," cracked Briegleb. "Go to it, Don!"

Hastily adjusting the altimeter to zero, I checked all the instruments and yelled "Okay" to Ortman, who had taxied out to the other end of the rope and was ready to give her the gun. He opened the throttle full, the slack in the tow-line "took up," and I had climbed into the air about twenty feet when Ortman left the ground. The bulk of my chute, I quickly learned, had me sitting too far forward in the cockpit so that I got the full force of the wind.

As we circled out over the bay, I saw San Diego from the air for the first time. It was a magnificent day, and the Fair Grounds, to get poetic, was like a dazzling white pearl in brilliant contrast to the green of the park. We were now 700 feet up, and Ortman had just smilingly turned around and clasped his hands together in the accepted gesture of "good luck."

But we wanted to put on the show over the bay, so I kicked a little right rudder and swung the glider in that direction as Ortman turned his ship and led the way. And the next time I looked at the altimeter I saw we'd reached 4,000 feet; also I noticed as we climbed higher that my hands had commenced to get cold. Now I did wish I had gloves on for sure. Again I looked at the altimeter, and now it dialed 9,000 feet. The clock showed it had taken twenty minutes to climb this high.

At this rate it would take us at least another thirty minutes to climb the additional 7,000 feet, due to the rarefied air. Wow! It was becoming much colder, had me warming each hand alternately by putting them between my legs. It was becoming hard to breathe, too. Before taking off, some one had given me some gum to chew if I became light-headed. That was okay. It had the effect of popping my ears, helping to clear my senses. But my hands! They were killing me. They felt like two stumps.

Higher. Higher. Now 13,000 feet—the "tallest" I had ever been in my life. Yes, and I was becoming plenty dizzy. Groggier and groggier I grew from lack of oxygen. Then I thought I heard something at my wingtip. I jerked my head to look around—and went "out" like a match in the rain barrel!

I don't know how long I was unconscious, probably not more than a few seconds. But when I came to I found myself flopping about at loose ends, whipping back and forth frighteningly—smack dab in the tow plane's prop wash! Ooof! A sickening vertical bank! And



now a vision of Ortman staring back at me white faced and frantically waving his hands.

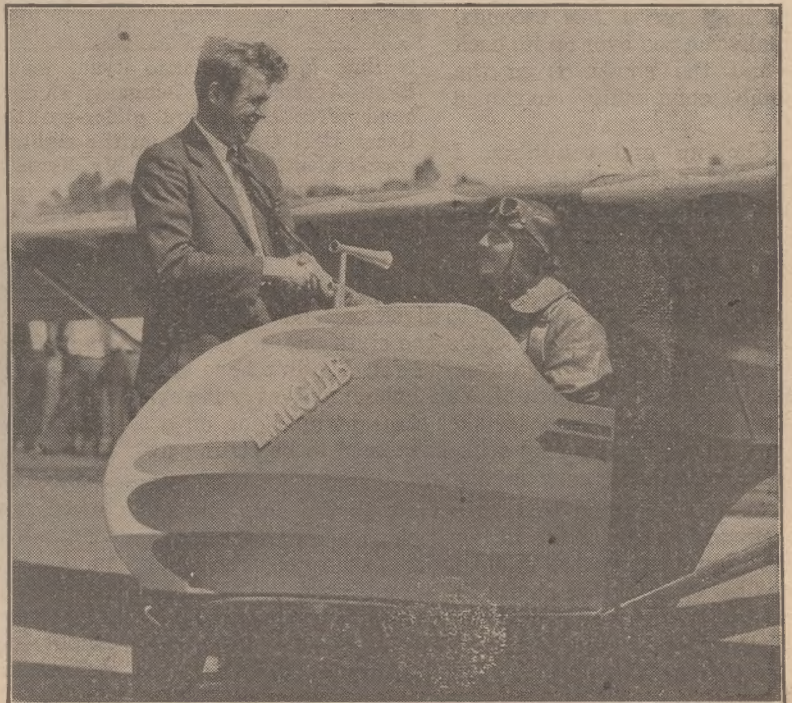
I righted the ship as quickly as I dared, then pulled back on the stick and climbed up again to the proper level behind the tow plane. Right there I made a decision. No more quick moves! And then I recalled that I'd been told just that before leaving the ground—told to move with great deliberation when at that height.

WE WERE now at 14,000 feet and my eyes started to blur. The ascent was now considerably slower. As for my hands, I couldn't feel anything in them now. I kept one on the stick and tried to keep it warm by putting the

other on top of it. It became so difficult for me to breathe I was fighting for air.

But strangely, the higher we climbed the less I cared. When a wing went down I'd say to myself, "Better bring that wing up"—and then about ten seconds later I would get around to it. By now we had been aloft about 45 minutes and were still climbing, though very slowly. When I'd look down, it seemed as though we were just hanging in space going neither up or down. Or forward either. But my airspeed read 65 miles an hour. My face was frozen so cold it felt like a piece of wood, and by now I was beginning to fear it was *really* frozen. With great difficulty I pried my fingers loose from the stick to feel my face.

Due to the "aero-neurosis" I was experiencing, I was doing some very sloppy flying. I would find myself first below the tow ship, then above it. The glider just seemed to skid around. Still, I didn't mind. I had a rare air jag, you see. However, I remember getting sensible enough to say to myself, "I feel goofy, all right. But we are now



at 15,900, and if I can hang on for just a little bit longer 'til we reach 16,000, everything will be jake."

Looking ahead, I noticed the tow ship now had a wing down, and Ortman's head seemed to be very still. Then his ship started wallowing around and I guessed he was affected as bad as I was. "Why didn't we bring some oxygen along?" I berated. "I'll have to cut loose right away and start looping before we both pass out completely." So glancing down into my cockpit, I fumbled around for the release. "Hang it, where is that confounded thing?" I had forgotten to ask Gus Briegleb where it was. Although it made me horribly dizzy to look down that way and search for it, I realized I *had* to locate it immediately. So I continued to feel around—and finally my hand felt a metal ring.

I pulled, but nothing happened. I pulled harder, *still* nothing happened. "That must be the brake," I thought. I looked ahead to find Ortman wagging his wings at me—the signal to release. Eying the altimeter, I saw it registered just over 16,000 feet and the clock read 54 minutes since the take-off.

Continuing to feel for the release, I at last discovered it between my legs, and I pulled at it with all my frozen strength. **BING!** Off she went. So I pulled clear back on the stick. At the top of this first loop, I passed "out" cold, coming "to" with a start to find I was plummeting down at eleventy-ump-plus miles per hour! With haste I again pulled back on the stick and leveled off to gather my senses, observing I had already lost a good 1,500 feet of precious altitude.

A record demanded plenty of loops. I had to act fast. At 100 miles per hour I dived her for another back somersault. The alty read 13,000 feet. Reaching down, I pulled the switch for the smoke bomb, then looked out to watch a puff of yellow smoke shoot out. Then at the peak of my third circle the glider hung on its nose for a few seconds, finally flopped over on its back—and the smoke from the bomb completely enveloped me.

Choking and coughing, I plunged again. This time I observed that fire and sparks were issuing from the bomb. But I thought nothing of it.

It was very difficult to loop at this high altitude, due to the thin air. I would have to dive to at least 100 m.p.h. in order to make the cycle. On the sixth one, as I pulled back on the stick to "go over," I felt I didn't have sufficient speed to complete it. Yet, I thought I'd try it anyway. Well, the poor glider shot straight up, hung on its nose, then stopped dead still. It seemed to be strung up there by an imaginary sky hook.

As I endeavored to regain control, the ship slipped backwards on its tail. And the stick was jumping all over the cockpit due to the glider flying in reverse. The wind shriled through the struts the wrong way, the airspeed indicator spun backwards, everything was topsy turvey. What a fight I was having, with the wind striking the elevators first, in the up position, then in the down!

After four or five seconds of this, the stick shot back

in my lap with no help of mine. I grabbed for it with both hands and held on for dear life—for I knew if I could manage to hold it for a few seconds, and the elevators didn't tear off, the ship would either right itself or fall into a spin from which I could regain control very easily. You see, unlike powered craft, gliders recover instantaneously as soon as the pilot neutralizes the controls.

With considerable swiftness, the ship shot up tail first into a stall, then stopped. I pushed the stick clear to the dashboard, and down I plunged, setting the airspeed indicator spinning again the right way. Picking up speed, I pulled her up and over for a nice circlet, but this time I waited until I had a speed of 125 miles per before going over. However, it was still difficult to loop, because being obliged to dive so far to gain the necessary speed, I was losing a great deal of altitude.

I had drifted about two miles now and discovered myself back over the Fair grounds. Again and again I looped, over and over, making those smoke rings in the sky. At this point, I suddenly felt something warm on my face, put a hand to it, and pulled it away covered with blood. My nose was bleeding. But I could breathe with

less difficulty now, since I had just dropped 4,000 feet—dropped it in less than forty seconds so the abrupt change in pressure caused my nose to "give."

THE SMOKE still streamed from the bomb—but now what? Small holes were appearing in the wing—burnt holes! Each time the glider was pulled up for a loop, it hung on its back and the fire from the bomb dropped down onto the underside of the wing, catching it afire. But luckily when I dived for the next one, the mad rush of wind extinguished it.

The ship was looping with greater ease, now that we had descended to 9,000 feet, as the warmer air was more buoyant. I could now turn her over at 60 m.p.h., so my gyrations became tighter and tighter, faster and faster. I wound her over at such speed I became so dizzy I had to stop for a few seconds to regain my breath. By now, I had lost track of how many loops I'd made, so I decided I

simply better do as many more as I could and still leave sufficient altitude to glide back to the airport, which was some four miles from the Fair grounds.

A camera ship had come near me, and I had to watch out for it to avoid a collision when I came out of a loop. I leveled out, motioned the film boys away. They banked away, and I felt safer.

More and more sky hoops! She was really "going to town" now. Why, I could wind over by diving at just 50 m.p.h. As I plunged the stick forward and commenced to pick up speed, I would brace myself with my free hand, grit my teeth, then wait until a certain wind-tone ring through the struts told me I was diving with sufficient speed to make the circle. I would pull back with deliberation at first, then as the glider shot up I would

(Continued on page 60)



Smiling broadly, Claude Ryan, head of the famed Ryan Aeronautical Company, shakes the author's hand after the record glider-gyrating flight. Sky Racer Earl Ortman is on the right. The youngster wasn't identified. But hey, Mr. Ryan, he looks like a swell prospect for that air school of yours —class of 1945.

Snapshots of the War

And They're All Bristols!

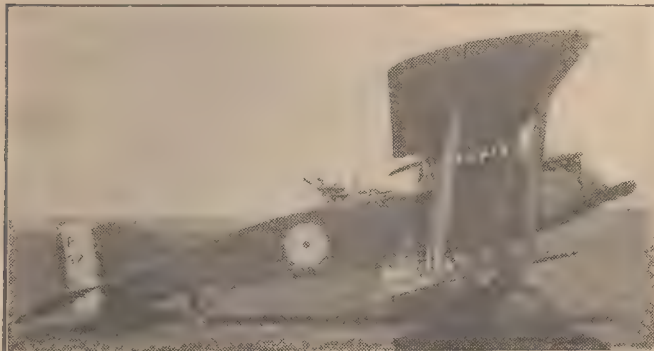
Right: We know you all like photos of triplanes—and here's a pippin for you! It's the renowned Mark II version of the Bristol "Braemar," which was powered by four American Liberty motors. She was a whopper, eh? This model and other large bomber types were especially designed to buzz over and drop "eggs" on Berlin late in 1918, but Germany, having other ideas, signed the Armistice before the Royal Air Force made good its threat.



Left: Particularly formidable and aggressive was the front view of the wartime Bristol Fighter—which was to be expected, since she incorporated many advances over earlier combat ships. Those radiator shutters on her Rolls Royce engine could be opened or closed from the pilot's cockpit. However, the long exhaust shown on this model was not standard equipment.

These Photos Are From the Collection of Joseph Nieto

Right: In late 1918, this night-bomber Bristol Fighter appeared. Not requiring the speed of the day job, she was fitted with a 175-h.p. Beardmore motor, which changed the nose lines considerably. An early-version tunnel radiator will be noted slung under the cowl. Observe also the bomb racks beneath the lower wing.



This is a grand side shot of the famed service Bristol Fighter. "Yes," says Arch Whitehouse, "this was the type we had in good old No. 22 Squadron." It will be seen that the two cockpits of the craft are quite close together, which enabled the pilot and observer to work as an efficient team. That's a Twin-Lewis gun mounted on the rear pit.



Listed as the XB Bristol, this is the least known of the famed Fighter series. It was the first British effort of the metal plane type during the World War. The body, as will be noted, was covered with a kind of sheet dural, as were also the tail surfaces. But the wings were sheathed in fabric. A 220-h.p. Hispano-Suiza drove her through the air.

"Wee gates!" yipped the Boonetown Bam. "You will have t' wait until I call the telephone company to get you down."



C'est La Goat!

★ ★ ★

By Joe Archibald

Author of "Duc Soup," "Herr Dresser," etc.

With Illustrations by the Author.

OUR YEAR 1939 has been mighty jittery. Gas mask makers and bomb-proof shelter contractors have been doing a land-office business over on the other side of the big dampness. The little sprouts in Continental kindergartens have been getting special instruction in the Manual of Arms in lieu of the low-down on Mother Goose and her ilk. Meanwhile, the head office of the Rising Sun team is suspected of having flooded the U.S.A. with candid camera clickers, Stalin's publishing houses are working overtime trying to get enough circulars printed to put Uncle Sam in the red, and Adolph H. is yodeling "Danzig With Tears in My Eyes," with a bugle all ready for the breaks.

But a certain war-vet citizen of Boonetown, Iowa, refuses to get upset over it all. That's because he—Phineas Pinkham—remembers a more jittery year. That was 1918. He especially recalls a certain Jerry tagged "The Leipzig Leech." He can't forget Mignon Fillay of Le Folies Begere, either. In addition, too, he has very clear memories of Major Pingwoodie, of The Royal Flying Corps, and Baron von Krum, of the Potsdam plane pushers. To say nothing of Clarence the goat! Anyway, it's a blithe tale, so let's get on with it—

It all started on Friday the thirteenth. Phineas Pink-

ham pedalled out of Bar-le-Duc after an evening in the Cafe of The Red Cow, where he had astounded the representatives of three armies with his capacity for imbibing cognac. Three quarts of giggle juice had apparently been gulped by the Boonetown miracle man. Then he had sauntered out of the Frog bar-room as if he had only sipped a pint of Grade A milk.

Two miles out from the hamlet, Phineas got off his bike. The front part of his torso had been bulging out like an alderman's corporation.

"Haw-w-w-w-w-w-w," Lieutenant Pinkham laughed, "I sure put on a show for them bums. Well, this is holdin' me down, an'—" He took a big hot water bottle from inside his shirt, removed a little tube from it, then emptied cognac into the grass at the side of the road.

Phineas continued on toward the drome of the Ninth Pursuit Squadron satisfied that he had had quite a night. Little did he know that it had only just begun. Without warning, at a bend in the sunken Frog road, something catapulted out of the bushes and hit Phineas broadside. The flyer, his means of locomotion knocked right from under his pants, spun through the air and then landed on his angel bones.

"Ma-a-a-a-a-a-a-a!" something bleated. And Phineas rose on his elbows and gave a look. Head down, feet stamping, a belligerent billy goat stood over him.

"You sure brought me down," Phineas said. "No buts about that butt! Hey-y-y! What did I ever do to you, huh?"

The goat seemed to be flirting with the idea of taking another poke at Phineas. But just then a big U.S. jalopy,

PHINEAS PINKHAM'S LATEST ROLLYING RIOT

lights dimmed, lurched around the crook in the road. A horn started honking and brakes squealed. The goat swung around and eyed the strange mechanical bug. But it refused to budge. The car stopped and an angry driver jumped out. The goat put its head down and chased him up a tree.

Out of the boiler there now stepped an angry brass hat. "You get that goat to let him down, you hear me?" he bellowed at Phineas.

"You think we're pals, huh?" Phineas sniffed, getting to his feet.

"Well, we don't talk the same language. Maybe you should try, as from one goat to another—"

"Oh-h-h, so you want to insult me, do you? What's your name—?"

"Stanislaus Miggorgaretsky! Haw-w-w-w-w-w! You thought I'd say John Smith, didn't y— Lo-o-o-o-okout!"

The goat, charging again, caught up with the brass hat just before he got to a fence. BLOP! The brass hat rode over it, yelling bloody murder, then two other high officers piled out of the car. Phineas tried to reason with the goat, but it was no soap. KERWHOP! A little fat Colonel was lifted right off his spurred feet, and he came down in a sitting position. Phineas was sure he heard teeth drop into the bushes. Something else was jolted loose from the Colonel's person—a long, bulky, official-looking envelope. The goat snagged it, started getting away from there. And Phineas gave chase.

"Get that goat! Oh-h-h-h-h—cripes! If he eats—"

Phineas stumbled and lost a lot of ground. The goat must have had antelope blood in its veins. It disappeared over the brow of a hill and was gone. A derisive departing "Ma-a-a-a-a-a!" was the last Phineas heard of it.

THE BRASS HATS pulled themselves together. The fat little Colonel rubbed his empennage with his left hand and doubled up his right. He poked it close to the Pinkham face. "Y-You know what y-y-you've done, you j-j-jassack? Th-There goes the plans of attack for the whole British army for the next year! Look at that officer sitting there! You know who he is? He's the greatest military strategist of the British Isles. Student of Kitchener, that's what! N-Now you've jolly well—blarst your blinkin', bloody eyes—!"

Phineas felt butterflies swarming in his stomach. "I didn't do it! I guess you think I was carryin' that goat around with me, don't you? I was mindin' my own business when—well lookit that bike of mine! Oh-h-h-h, if I threw a rock in a well, I would hit Foche who went swimming in it. You can't pin this onto me, you grapefruit with legs on. I will fight

"Hey-y-y-y! What did I ever do to you?" Phineas pleaded.

No sooner were those secret British battle plans dispatched down the road when the whole works got jammed. But it wasn't long after Clarence horned in that the "Leipzig Leech" was taken in, von Krum fell in, Garrity was all in, and Phineas was cheered in. And then Major Pingwoodie—
passed out!

you to the highest U.S. court, an'—"

A Brigadier staggered up, a gun pointed at his own head. "M-Might as well shoot ourselves, Dunnnittle. When London hears of this, we—"

"You have got the gun twisted around," Phineas broke in. "You pull that trigger now an' you'll blow a hand off. Let me show you—"

"Fresh blighter! I'll have your hide for this," the little Colonel said. Then his knees started knocking. "F-Fancy. The goat—eat-ing—" And he passed out.

Phineas ran to a ditch, scooped up water into his hot water bottle,

and poured it over the Colonel's face. The brass hat from Brigade sputtered, opened his mouth. Then he almost strangled until Phineas got a little frog loose from his throat. The Boonetown pilot then hurried away from there.

Near Metzeweise, at precisely that same moment, high born Krauts—the "Who's Who of the Kaiser's front parlor—were huddling. One of the war lords banged a fist down on a table with such force that seven monocles fell out of as many eyes. "*Der tag!* It is coming, *Mein Freunds!* Der Leipzig Leech, as *der* Allies call him, he nefer has failed. Twice yet in *der* same place he vill strike. At *Leutnant* Pingham of *der* Ninth Pursood Squadron—and at *der verdammt* beef-eaters! Already ve have reports from K-3, *ja!* Any minute he vill strike—*und*—Pingham he is den no more! The British plans of attack—he has a line on dem, chentlemen. As good as in *der* pocket!"

"*Hoch! Hoch der Kaiser!*"

"Baron von Krum!" the war lord tossed at the bristly pated hook-nosed Junker sitting across from him. "It is up to you to bring *der* plans from across *der* lines. When *der* pigeon comes from K-3, you will know where to meet K-3. Is dot clear, Baron?"

"*Ja!*" Den I get Major Pingwoodie, *der* Englander! Seventy planes, *hein?* Bah-h-h-h-h! While I am counting my hundred he will be pooshing up posies yet. He boasts he vill down me—Baron von Krum. Ho! Ho! Dot is *der* big laff!"

"Goot! Ve remove Pingham. Ve get *der* plans of *der* British attack. You, von Krum, vill shoodyt down Pingvoodie. Den Germany wins, no? Ah-h, ve Germans! *Hoch!*"



PHINEAS PINKHAM spent two hours trying to find the goat. He finally trudged into his Nissan hut well after midnight. Then in the morning, the tragic news began leaking out. Chaumont, Paris, London, Rome, and Washington ordered a soft pedal regarding the loss of the momentous plans. Brass hats scurried everywhere.

A sizable contingent stopped off at the Ninth Pursuit Squadron and quickly cornered Major Rufus Garrity in his sanctum. A Yank Lieutenant-Colonel and a red tab from the Limey Brigade told the C.O. to hush up the loss of the strategist's brainchild, for Heaven's sake!

"We know that Germany's master-spy is not far away," the brass hat said. "Well, if he finds out that our plans are destroyed, the Kaiser will get up the spunk to put on a terrible show. Boche morale—and all that, you know!"

"Huh—eaten up by a goat?" Garrity said. "Pinkham mixed up in it, what? That crackpot flyer of mine. How? The goat was with him, they told me. Insulted a brigadier—I mean Pinkham insulted the brig—I'll put that cuckoo on the carpet, find out what he knows. I'll get him right now, gentlemen. Wait!"

The door burst open. Bump Gillis saluted in a hurry, then put on the verbal heat. "S-S-Sir—it's Ph-Phineas. H-He's dyin'! The poor guy he drunk that half bottle of fly poison—in the old cognac bottle. He thought it was—Come quick!"

"Wha-a-a-a-a-a?" stammered Garrity. "Why, this is ter—You get the medico workin' on him, Gillis? Show me where—?"

Phineas was slumped in a chair at the mess table. And he was mumbling, "G-Get me paper an' p-pencil, as I—want—to write—"

"Speak to me!" the Old Man pleaded. "It's your C.O., Phineas. What can I do? I'll get all the doctors in the A.E.F. Just hang on until—"

Bump brought Phineas a sheet of paper and the stub of a pencil. Phineas wrote:

"I knew this would happen. . . . Threatened me before. . . . Me, Phineas Pinkham, bein' sound in body an' mind, hereby accuse the followin' of murderin' me: Lieutenant Gillis, Captain Howell, Flight Sergeant Casey, Major Rufus G—."

"N-No-o-o-o-o-o! That is not so," Garrity yelled. "We may git hung. Phineas—listen! It was a mistake."

"Haw-w-w-w-w-w!" Phineas laughed. And he took the hot water bottle full of the fly poison out from under his shirt. "I guess I had you bums sweatin', huh? That is a swell trick of mine. I just—"

"Murder, ha-a-ah?" Garrity howled. "You give me an idea. Get me my gun! I'll—"

"Amazing," the red tab gulped. "He jolly well has two stomachs, what?"

THE CALL to mid-day patrol saved Phineas for the nonce. The Old Man wiped his brow and told the Boonetown wonder to go out and run into twelve Heinie slugs. "I hope von Krum gets you where he wants you, you big baboon!" he yelled after the impish Iowan.

"Jolly squadron, what?" the British red tab sniffed. "Well cheerio, Major, and all that. Bum job you have here."

"A" flight returned from the wars looking as if Garrity's patrol wagons had been attacked by eighty-pound woodpeckers. Phineas brought his crate down with the top wing see-sawing, and he was covered with enough oil to settle all the dust in the Sahara. "Well, you almost got your wish," he said to Garrity. "That von Krum threw everythin' but his gas tank at me, and am I glad that was nailed down! But better luck next time, Sir."

Captain Howell took a spent bullet out of his pocket and tossed it aside. Then he looked up to see a Limey S.E.5 jockeying for a landing overhead. "Say, that's Major Pingwoodie," he said. "What does he want, huh?"

Pingwoodie made a sweet landing, rolled up to the group of jittery pilots, and legged it out of his pit. The Ace of Limey Aces saluted the C.O., then let his gaze rove over the Ninth's riddled air buggies.

"Had a bit of a brush, what?" Pingwoodie grinned. "Met the jolly old Baron, right-oh?"

"It wasn't Little Bo-Peep," Phineas growled. "And by the way—I ain't seen you knockin' no feathers off that buzzard, pip pip!"

"Hold your tongue, Pinkham!" Garrity snapped.

"I'll try, but I bet it slips out of my hands, as I been chewin' slippery elm for my cough," Lieutenant Pinkham said.

"Odd chap, isn't he?" Pingwoodie said. "But now I must have a talk with you, Major. Most urgent, you know, and all that."

"So that's the Limey who is going to shoot down that crummy von Krum, huh?" Phineas said sourly as Pingwoodie strolled away with Garrity. "What a fit that pip-pip bum would have if I got the Baron first!"

"Ha! Ha! Ha-a-a-a-ah!" Howell laughed, and the other Spad pilots joined in. "You get that Kraut and I'll eat a Frog's suspenders!"

"I'll remember that," Phineas countered. "If I steal Pingwoodie's stuff, don't you be no Welchman, skipper. Haw-w-w-w-w-w!"

"That Limey," Bump said, "is more than a pilot. He is part of the British Intelligence Corps, too!"

"Does he command a pig-boat, also?" Phineas wanted to know. "Well, I must not dilly dally. I got to take a little trip. I am mess officer this week, as you know, and we are in need of scads of stuff t' eat. So it is to Barley-Duck I go."

AN HOUR LATER, Phineas got off a motor-cycle, crawled over a fence, and walked slowly toward a little Frog farm. Near a decaying apple tree stood a goat—and Phineas was positive that it was the ruminant that had upset the whole British military strategy. It had probably already digested the brainchild of the protégé of the late Kitchener of Khartoum.

Phineas approached with caution, taking a small turnip from his pocket. He threw it toward the goat, and the four-legged horn bearer gave it a quick inventory

(Continued on page 74)



"Zen you weel have it ze fight!" Babette screamed at Mignon.

Through the Aero Lens



Wow! Looks like the New York City Police is after "The Griffon"! In any event, the Gotham Government has now reorganized its aero-arm-of-the-law, and here's one of the new 150-h.p. Whirlwind Stinson Reliants the sky cops are buzzin' around in. So next time you rob one of Father Knickerbocker's banks, don't put the loot in a Taylor Cub and try to hide out with it behind the 88th story of the Empire State Building.

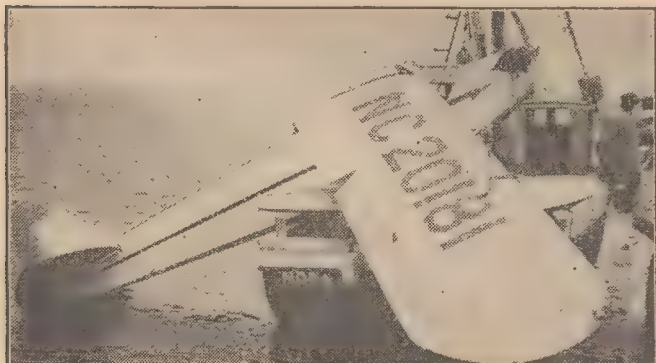
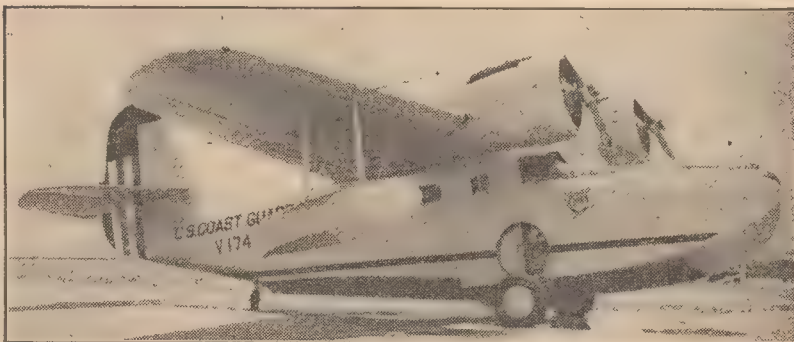


Above: Gee, is Orson Welles and his Mars-men on the prowl again? You'd think so—but actually this is only a local whatizit that's been haunting the Los Angeles Airport of late. Classed as a helicopter, it mounts a 225-h.p. engine which drives both a regulation prop and the lifting vanes. The latter are in two sets which rotate in opposite directions and probably blow the paint (if any) off the fuselage. Amazing how hard some guys can make flying when they put their minds to it, huh?



Left: This is the sleek new Aerovel job designed and built by Hall Mill at Springfield, Mass. It's powered by two 125-h.p. Menasco motors set in pusher position, accommodates five persons, and features an automatic pilot and retractable tricycle landing gear. The cabin's covered with plywood; the wings with fabric.

Right: Our Coast Guard has also added considerable new equipment recently, including this striking Grumman JRF-2 amphibian. You fans will quickly recognize this job as a Government service version of the earlier G-21A—or don't you? We understand it has a top speed of about 200 m.p.h. and a service ceiling in the neighborhood of 22,000 feet. Both the Army and the Navy have also purchased similar military versions of the popular Grumman civil craft. But you'll have to go to sea and get sick, half drown, or sunburn, to get a ride in the plane pictured here—unless you get yourself a job with the flying Coast Guard.



If our Stone Age ancestors had seen this shot, they'd swear some mammoth culture had attacked a boat at sea. Frankly, however, this is the rescue of a pontooned Piper Cub by the good ship "Nora." Said Cub took a belly-flop off Sandy Hook, N. J., and folded its wings in protest. Luckily, the pilot and passenger got out of it unhurt. And we wish you the same if you ever get into that kind of a jam.



Brilliant lights are what you'd be up against if you ever got a notion to play "I spy" around the Italian Air Ministry. For Il Duce's counter-espionage boys use this Mazda method of discouraging foreign secret agents from climbing water pipes and attempting to jimmy windows at night. And now Dumb Dora says, "Why not sneak up first and turn the lights off?" (P.P.C. photo).

They Solved Their

There are still lots of old fogies who "can't see" aviation. "What's the sense," they bleat, "of galavantin' around in the air? Ain't the earth good enough? Why get there faster?" Well, next time YOU meet up with one of these o.f.'s, you can quickly shoot his arguments full of holes—with the ammunition supplied by this swell article.

By Edwin Laird Cady

Author of "Next—The Muscle-Powered Plane"

With an Illustration by Joe Archibald

YOU'D BE SURPRISED to know how often baffling riddles are unraveled with aircraft—in short, how Mr. Air Speed has become a champ in the field of unjamming jams. Yes, thanks to the Wright Brothers, many a man who's had a tough nut to crack has got down to earth with his problem—by going into the air!

What do we mean? Well, right here we'll fire away with some graphic examples that picture our point. Let's start off with an incident that happened back in the twitching '20's—

Jim Russell, who'd been a World War sky-fighter, was facing his dad in the offices of their foundry. The Russells, you see, had sunk all of their hard-earned mazuma on the proposition that their new way of melting and mixing iron would be a humdinger.

But now their spirits were lower than the proverbial underside of a coffee cake in Neptune's third basement. For one batch of the special metal was a wash-out—and here it had already been shipped around the country. Yes, it seemed a sure thing that the foundry would go to the bow-wows on that boner.

"Patoie!" spat the elder Russell, who was a tobacco-chewing foundryman of the old school. "Jim," he fol-

lowed up, "if the gol blame customers were not so far apart, we could get samples from every piece of iron that has gone wrong, have them all analyzed by a chemist, find out what is sour—and fix it up. But that would take weeks, what with winter traveling being so slow. And the customers won't wait that long."

"SSSST Pang!" Jim could smack the gobboon with a bull's eye himself, although the reports that he had downed three Fokker-flying Krauts by blinding them in mid-air were a bit exaggerated. "Listen, Dad! I'll bring those customers close together. Speed will do it! I'll lick distance with air speed! Let's go!"

Jim did not own a plane, so he hired one.

In three days he covered all the customers in Ohio, Illinois, Michigan, and Indiana, flying from city to city, landing wherever he saw a good looking field close to his destination, and using

And then there was the strange saga of the sky-going Smiths. "What," pondered the mystified airline ticket agent, "was going on? A cough drop convention?"

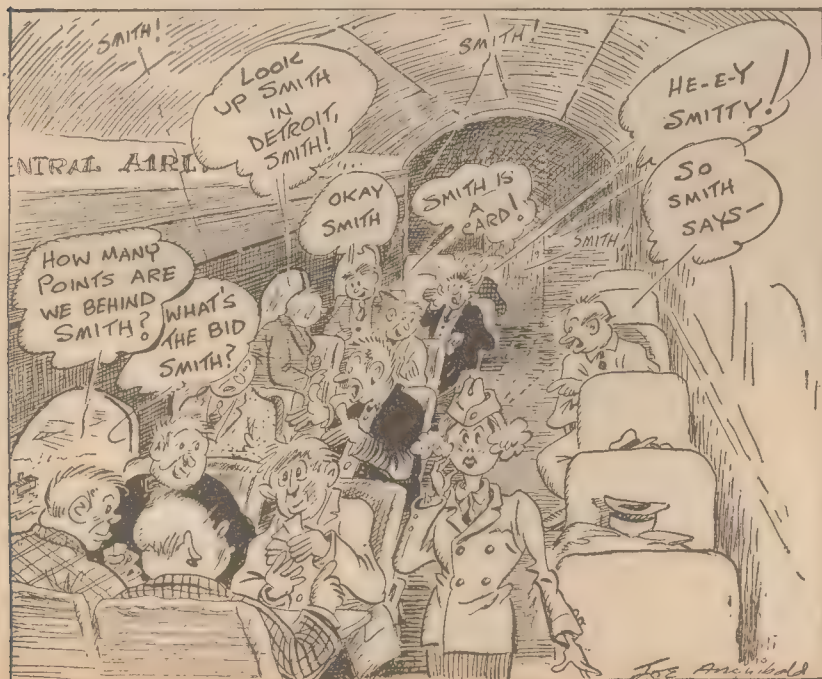
"drive yourself" jalopies to get around the streets.

The plane was an open cockpit job. Good airports were then few and far between, and most fields boasted wind socks as their major equipment. What's more, Jim was betting his life against the all too likely possibility of being caught in a heavy snowstorm while he was flying. But Jim won!

A Pullman to New England gave him the novelty of a night's sleep. And there he made his jumps via borrowed automobile. But in New York State, Pennsylvania, and the South, he used hired planes again. And, boy, how he used them!



What to do? A Diesel engine broken down in California . . . workers idle . . . customers clamoring! Why, they simply air expressed a spare engine from New York and flew the busted one back east for repairs. That did the trick in a hurry.



Puzzles With Planes

Often the towns he "made" had no air identification, thus he had to pick them out by guess and by map. But in eleven days he was back home in Kentucky, having completed a trip that would have taken two months by ordinary means. And the business was saved. Air speed had done the trick!

TURN the clock forward, now, to 1939. Walt Pennington, sales manager of the—well, we'll call it the Succulent Foods Co., of New York—is biting off the erasers of lead pencils and the heads of office boys. Why? Because the firm's business in the State of Texazona is going down like a pursuit ship in a test dive.

He must get to Texazona at once—and we don't mean tomorrow, we mean right now! But is he faced, as was Jim Russell, with a round of haywire crates and stumpy landing fields? Not at all.

With a careless swish of his walking stick, Walt boards the next airliner for Texazona. There he discovers a new diet fad is in full bloom. The Texazonans, he finds, no longer "go" for Succulent Cereal because they've taken a great liking for Fireball Flakes containing vitamin XP3-Z1. And if that idea spreads, then thousands of men in the Succulent Cereal factories will be applying for relief. So Walt—having learned from a chemist that his Succulent product is, as the expression goes, lousy with that brain-building vitamin XP3-Z2—simply puts on a big advertising campaign which says that if you got brains you'll eat Succulent Cereal and get more brains.

Now giving his cane two extra swishes for luck, he hops via plane back to New York. Meanwhile, the campaign does the work, and the jobs of the men in the cereal factories have been saved by air speed—until the Fireball people think up a new gag. And you'd be amazed to know how very little exaggeration I've employed here to cloak the real case, which I'm not permitted to divulge.

Air speed has also solved a slew of enigmas having to do with labor strikes, which like punches in the nose, can be good things for both parties, but also can be mighty tough on both sides.

Anyway, in Detroit, not long ago, the ticket seller in an airline office was told by phone to reserve seats to Kansas City for Mr. Smith and a party of four other Mr. Smiths. Said ticket man wondered if there was a cough drop convention going on, but he entered the order.

Then a few minutes later, the phone told him to reserve seats on the same

Right: "Once the ladies get sick of a hat or dress style," affirms the author, "they quit it like hitting it with an axe." Then garment firm executives swear and tear their hair. That is, they USED to. They don't anymore because planes now rocket new styles across the country and over the seas almost faster than the women can change their minds. And here we see a chic new gown about to be whirled to market.



When a dredge went on the fritz recently, an important waterways project was stopped cold. There wasn't a replacement within two thousand miles, so the engineers were stumped. But not for long. For this 605-pound casting was sky-hurled out to them in almost no time—and work went on as usual.

flight for Mr. Smith and a party of six other Mr. Smiths! That was a puzzler. Had all the guys named Smith been ordered to get out of town?

At any rate, he chartered a special plane and assigned it to the two sets of Smiths.

It turned out that there was a wild-cat strike going on in Kansas City. The first Smith party was composed of executives of the chain of factories involved, and the second outfit was made up of labor union leaders. And every man was calling himself "Smith," you see, so the newspapers would not get wise to the fact that so many big shots were working on that one strike, since a few tabloid scare headlines could easily fan that little labor blaze into a nation-wide four alarm fire.

These men, who all knew each other, were not sure what the shooting was about. But once in Kansas City, they gave the old heave-ho to the gazabos on both sides who had started the fuss. And in a few hours they were all playing pinochle in the double seats of the airliner

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Death Strafes the Desert

By Arch Whitehouse

Author of "Television Tracers," "Hawks
From the Smoke," etc.

Illustrated by Alden McWilliams.

HARDLY had the bride accepted the flinty kiss of the Air Force Chaplain, who was the first to congratulate her and call her by her new name, when Crash Carringer sensed that something had slipped somewhere. He had been standing up as best man in the marriage of Air Commodore Mount and Miss Joan Draper at the King David Hotel in Jerusalem, following their strange Trans-Jordania adventure.

There was all the usual flutter of rank and decorations, the click of military heels, and the enthusiasm of the guests in the private drawing room. But amid it all Crash had caught an indefinable air of tension—of menace.

The countenances of several of the officers present bespoke uncertainty and anxiety. He had noticed smooth-shaven chins twitch and fingers fumble at tunic buttons and belts. More than one pair of eyes was on the door at the back of the room, betraying more interest in outside possibility than in the words of the ceremony. Crash even caught a whiteness in the face of the Chaplain as he prompted with the words: "I, Richard Malcombe Mount, do this day take . . ."

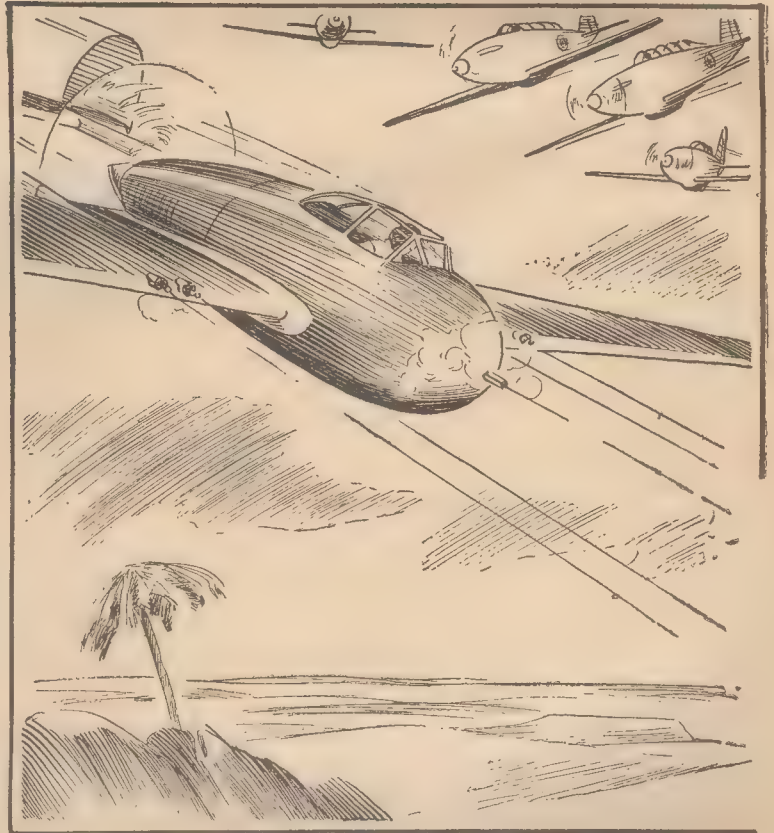
Crash turned, glanced at the Wing Commander who had assumed the responsibility of "giving away" the bride. His name was Hovis, Crash remembered. They had been introduced just before the ceremony. Hovis had gripped his hand with startling warmth and had said, "I must speak with you after the ceremony, Carringer. Not a word to Mount, either. There's a good chap."

" . . . to be my lawful wedded husband," Joan Draper was saying.

Carringer looked at Hovis again, saw that his face had assumed a suety pallor. He was flicking his sleeve up and glancing at his silver wrist watch. Somewhere outside, a telephone bell jangled and Hovis gave a visible start, showing plainly that he was expecting something at any minute.

"What the devil is next?" Crash mused. His mind was

Joyous ceremonial words were being intoned by that British Army chaplain in the King David Hotel—and they should have beckoned "Crash" Carringer to a round of social gaiety. But instead, those words proved to be his prelude to a grim gamble with weird doom on the desert. For the instant that wedding ritual ended, Best Man Carringer found himself involved in a ghastly sky mystery where Fate quickly stripped him of his right to that "Best Man" title. And had it not been for some faded print in an old, tattered book . . .



running over the events of the past few months. He had been free-lancing all over the world selling Hale Hellion fighters, and his travels had led him into all sorts of strange sky adventures. He had learned the truth of the statement that the sun never sets on British possessions; for no matter where he headed, how many miles he flew, or how many mountain ranges or desert plains he crossed, somehow he always managed to wind up deep in some mystery involving the Royal Air Force. Crash, however, didn't mind helping whenever he could, because so far he'd sold the R.A.F. several hundred Hale Hellions.

Hovis was now obviously uncomfortable. He kept dampening his lips with the tip of his tongue, and his field boots creaked as he shifted from one foot to the other.

At last the ceremony was over, and Hovis, ignoring the usual gestures of congratulation, snatched at Carringer's coat sleeve.

"In here—quick!" he whispered.

"Wait a minute. I've got to shake hands with the happy couple, and—"

"Never mind," Hovis broke in. "There'll be many more chances. This is more important." And he yanked Crash around some potted palms and through a side door.

THEY were now in a small room where a Flight-Sergeant was hanging on to a telephone with an expression that was part fear and part numb hopelessness.

"Just a minute, Carringer," said Hovis, snatching at the phone.

"Hello? Hello? Yes, this is Hovis. Anything new? Not a thing? Nothing? Sorry, keep in touch with us."

He handed the instrument back to the Flight-Sergeant. "Nothing yet," the Wing Commander then said, with a blank look at Carringer. "Oh, of course, you have no idea what I'm talking about, have you?"

"Personally, I think you need a good stiff peg of something," suggested the American. "What's up anyway?"

"You intended going through to Ramleh, didn't you?" queried Hovis.

"Ramleh? Where's that—farther west?"

"Ramleh is another R.A.F. station. It's near the coast just south of Lydda, on the main line from Egypt to Haifa. You'll be heading that way, won't you? Anyhow, everything's gone wrong." He went on more slowly: "We've lost two flights of No. 6 Squadron!"

"What do you mean, 'lost' them?"

Hovis motioned Crash into a chair, then said: "Here's what I mean. 'C' Flight of No. 6 was at Ramleh doing

routine. As you know, the Squadron headquarters is at Amman. That's on the other side of the Trans-Jordan—the other side of the Dead Sea, to be exact. Well, 'C' was at Ramleh with No. 2 Armored Car squadron, and they were to have been relieved by 'A' Flight yesterday. But somehow, both flights have disappeared!"

"You have phoned this Ramleh place?"

"For hours. But there's no answer, no signals—nothing!"

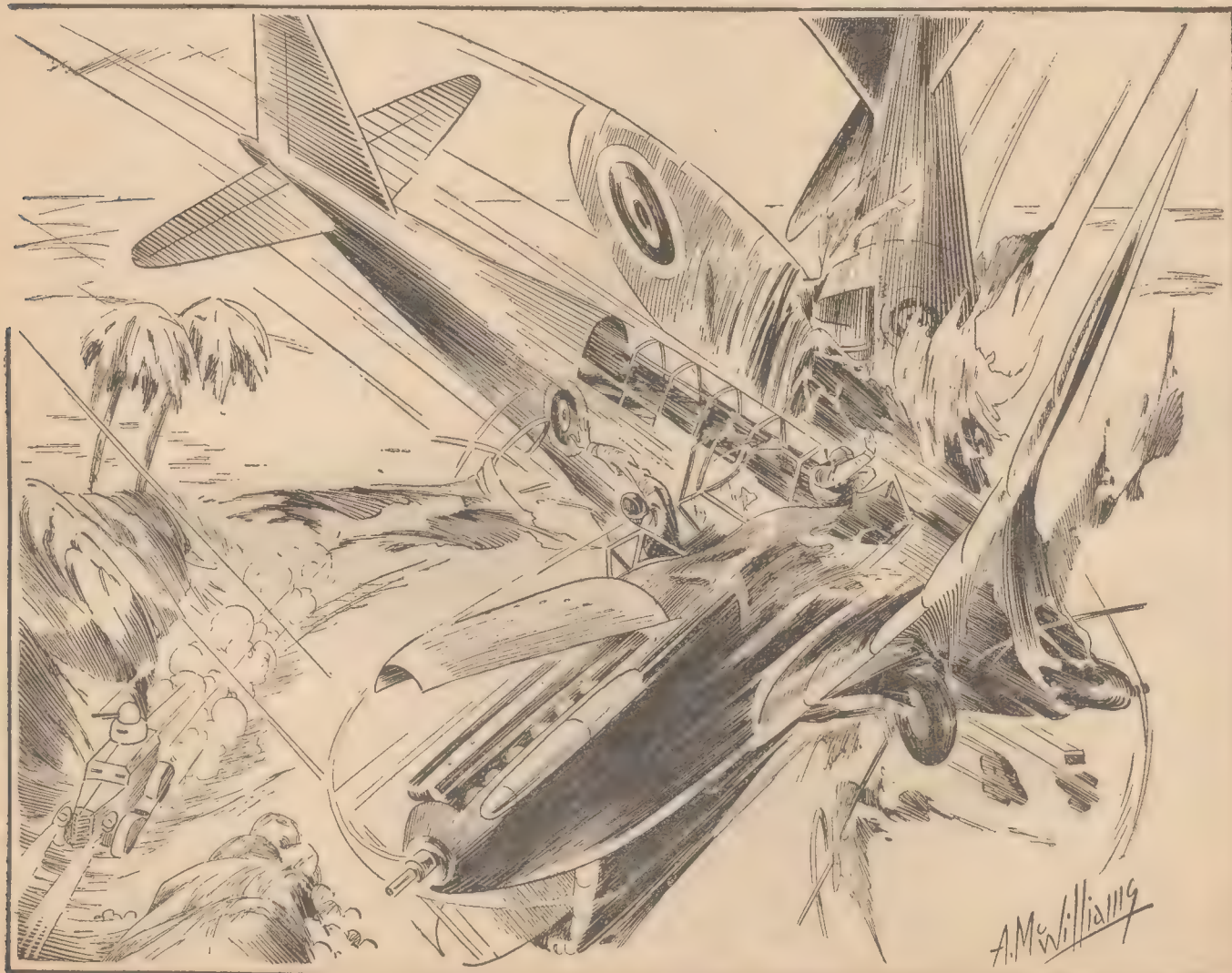
"This 'A' Flight outfit left Amman okay?"

"On the dot. You see, they both took off at the same time—about 10 o'clock yesterday morning—and they planned to pass each other somewhere west of the Jordan. Yet 'C' Flight didn't arrive at Amman—and we can find no trace of 'A' at Ramleh!"

Crash frowned. "But why didn't one squadron stay at Ramleh until the other arrived?"

"Ah, you see that might have caused trouble, because one outfit would have had to wait there for the late afternoon so that they could get off. You see, out here the air is so thin at noon, owing to the heat, our loaded bombers can't get off the ground safely. So we try to avoid take-offs and landings at that time of day. You may not experience it with your Hellion, however, in the same way as do our Fairey Battles," explained Hovis. "At any rate, both flights were in the air at the same time, and both seem to have completely disappeared."

Just above the speeding armored car, the wretched Fairey Battle swerved sharply—full into the nose of its companion ship! The collision of their silver bodies was like the clangor of crashing boilers. . . .



"What about the other flight of the squadron—'B' Flight?"

"We can't spare that group for a search now because it's busy keeping the Wahabi tribesmen in their place. The Wahabis always get rambunctious about this time of the year—as soon as they have harvested their crops."

"And you want me to go to Ramleh and look the situation over?" asked Crash.

"That's it—at least you might make a cursory check for us and radio back so we can plan relief or assistance from here. In the meantime, we can probably get another Armored Car unit out of Maan and see if it can do anything."

CRASH PONDERED a minute, allowing his mind's eye to focus on an unseen map. "Let's see," he said, his eyes on the floor. "From Amman to Ramleh is, roughly speaking, 75 miles. Your 'A' Flight should have reached Ramleh in well under half an hour, and the same goes for the flight giving up the Ramleh field."

Hovis nodded anxiously.

"In other words," said Crash, "all this strange business could have happened within half an hour—the time taken to fly from one field to the other."

"Well, within three quarters of an hour at the best," put in Hovis.

"This is certainly a pip!" sniffed Carringer. "And I blamed well will look into it for you, since I am headed that way. But there's one other point I want to ask you about."

Hovis cocked his head to one side slightly and studied Carringer's face.

"I mean this," said Crash: "Was the Ramleh station left without a soul on the field? Weren't there any mechanics or guards left there after the ships took off?"

"Oh, yes. The ground personnel was to remain there and take over the incoming machines of 'A' Flight. It meant only a routine change of personnel on the squadron books. All mechanics and others of 'A' to be automatically transferred to 'C'—and 'C' to 'A'."

"Is that usual?" asked Crash.

"No. We generally change the ground staff as well as the flying personnel. But in this case—conditions being what they were—we decided against it. This time, we wanted to make the change as simple as possible and move only the machines and flying personnel."

"I see," said Crash, listening to the wedding gaiety that was going on in the next room and now realizing that he must miss it. "Then, if you can't raise the station, it's quite possible that—"

"Yes, that's what we are afraid of," the British flying officer interrupted with a voice that had a touch of cracked glass in it. "We're afraid something serious has taken place."

"I should think so. But it seems strange to me that no one has broken through with some news by this time."

"The Ramleh station is in a restricted area," explained Hovis. "No one but station personnel is allowed there."

"I see," nodded Crash. "Then the sooner I get there, the better, eh?"

"Right!" crackled Hovis. "Come on, I'll get you a car and get you out to the El Kuds field where you have your plane."

"Let's go!" answered Crash.

THEY avoided the wedding party by slipping out of a side door, then found a delapidated taxi and scrambled into it. Both were silent as it rumbled through the maze of Jerusalem traffic, avoiding donkeys, creaking-wheeled carts, groups of badgering merchants, and wide-eyed tourists. Crash was now worried, but he made no mention of his fears. He was certain something serious had happened, but he was unable to put his finger on any one point to argue about.

Just before they reached the air field, Hovis drew a sketchy plan of the Ramleh layout, showing the position of the hangars, the guarded gates, and the identity of the various other buildings connected with the station. He marked the radio shed, the Officers' Mess, and the quarters of the pilots and observers.

"They use these first two hangars," he explained, jabbing with his pencil, "to accommodate the planes. This one is used to quarter the cars of No. 2 Armored Car squadron. The other buildings are men's quarters, machine shops, and the like."

Crash nodded, took the sketch, and slipped it into the pocket of his white shirt.

In a few minutes they were clanking along the tarmac in front of the El Kuds' hangars. A few dreary natives sat hunched on their heels. An Imperial Airways plane was lumbering away, and a hot wind spattered them with flinty dust.

Carringer's Hale Hellion, that famous single-seat pusher fighter powered with the Allison in-line engine, was sheltered in a corner of the No. 1 hangar and was being guarded by three young British R.A.F. Aircraftmen. It had been carefully serviced and the guns checked and loaded. All in all, Crash sensed that she was ready for immediate action.

"That's a lovely bus you have there," said Hovis when they were signing the book for the Customs officials. "But I have an idea you'll need all she carries."

"Well, she hasn't let me down yet."

"She shouldn't. I've never seen a more suitable job. I hope you are successful in selling a few hundred of them to our lot. We could do with that sort of thing out here."

"Well, Mount certainly put in a strong word for me," grinned Crash.

"I have no doubt but what you will get a good order—particularly if we can put in another good word for you on this Ramleh mess."

"Seems that the most important part of this racket of mine is to keep getting into trouble—and out again," Carringer said with a sly grin.

"Well, Carringer," returned Hovis, "that's the best sort of test; for with an American ship, we must know what it'll do out here—not what it can do on Long Island or in California."

"You got something there," Carringer agreed, slipping on a light helmet. "Now get your lads to drag this boiler out, will you?"

"Right! We'll soon get you off. And I want you to contact me by radio the minute you get there."

"Don't worry. I will if I get there," said Crash.

Hovis became more serious as he thought over Crash's statement. "I wouldn't blame you if you refused to go," he said. "But we are in a spot. I figure your plane wouldn't be noticed, whereas if we send out a formation, someone will sense that something's up and heaven only knows what might happen. You're our one chance."

"I'll do my best. Can't say any more," said Crash. And his battered, homely face carried a wealth of sincerity.

WING COMMANDER HOVIS rubbed his gaunt chin as the Hellion thundered across the field and fought to keep straight in that rare atmosphere.

(Continued on page 62)



The Red-Jap War Begins!

OUR COVER PAINTING'S GRIPPING STORY

IN THESE STRANGE modern days of ours, fighting nations don't formally declare wars. And not being any different from the others, Japan and Russia haven't typed out any official war papers, either. Nevertheless, what's now going on along the Manchukuo-Outer Mongolia frontier is plenty more than just a "border incident." It's a real, honest-to-gosh international scrap!

And that's why we term it such without mincing words.

For the past few weeks, both countries have been spouting amazing announcements of victories, and big air fights have been described which required no added imagination by the news observers. Regardless of which side is telling the truth (if either is) it still remains that troops, artillery, tanks, planes, and every other type of fighting equipment have been poured into the action. So what we tell you here is not a story of what *might* happen but a record of what *has* happened.

Reports have it that friction between the two air forces actually got going in a big way on June 22. Tokyo declares the Russians launched six air raids on that date, though Moscow claims the Japs started it. The battles have been carried out near Lake Bor on the boundary separating Japan's Manchukuo protectorate and Outer Mongolia, which is backed by the Soviet.

Our cover painting this month shows in graphic detail the kind of battle clash which occurred after raiding Japanese planes staged revenge attacks near Handshur. The Nipponese are depicted following up with a troop, artillery, and tank action—whereupon several flights of Russian Air 7 type two-seat fighters have dived in to strafe them unmercifully. The Red airman in the foreground is doing plenty of damage—but he's flown too low and may crash any second. For the moment, the Russians have the upper hand. Japanese Nakajima 91's, however, are seen racing in on the right to repulse the attack.

The Air 7 is a high performance monoplane powered by an M.22 9-cylinder Russian-built radial. It's made by Osoaviachim, at Moscow. The Nakajima 91, on the other hand, is a single-seat pursuit in the 200-m.p.h. class. Turned out by the Nakajima Aircraft Works, of Tokyo, it mounts a 450-h.p. Japanese "Jupiter" engine.

The confusing feature of this particular undeclared war is found in the unusually conflicting reports given out by Moscow and Tokyo. During the whole of the June 17 to June 27 skirmish period, the Reds claim to have shot down 91 Nipponese craft while losing but 32 jobs. The Japs, however, declare they lost but 11 ships during that time, and they say they knocked off 251 Russian planes. Meanwhile, the Russians report a June 26 clash in which they downed 25 Jap jobs and lost only 3 planes. But Tokyo offers no report whatso-

ever of a fight on the 26th. Nippon does mention a battle on the 27th, however, in which they claim 120 victories and but 3 losses.

Ground action is recorded as starting on May 11, according to the Soviet Tass News Agency, when Japanese-Manchukuan troops are said to have attacked across the frontier near Lake Bor. Tass says the Nipponese lost 400 dead against the Mongol People's Revolutionary Army's casualties of 40 dead and 70 wounded.

On May 28, both sides seem to have got serious with all manner of troops and armaments. Tass confesses the Soviets then lost 9 planes in an "unexpected action" while downing 3 Japs. But the Nipponese Domei Agency argues that 42 Russian planes were destroyed in this battle. Later, we're told by Tass, 120 Jap craft attacked across the border and were repulsed by 95 Red ships, the J's losing 31 and the R's 12. Tass goes on to say that the Soviet forces have never violated the boundary ruling—except to chase Jap ships back to their bases. Tokyo, as would be expected, likewise refuses to take any blame for border violations.

No matter, when they put more than 200 war planes into the air for one battle, they're certainly not playing marbles. We wish, of course, that we could get the *real* lowdown on all this air fighting, but unfortunately each side is simply playing the game of denying the other side's figures.

According to reliable sources, however, Japan should have a large air force by now; for it is believed that the

Imperial Nipponese Air Services currently include between 2,500 and 3,000 first-line planes. They have about twenty factories building aircraft and engines. And the big Mitsubishi firm consists of four main factories, the largest of which has floor space of about 3,000,000 square feet. It employs 10,000 men and can turn out 800 complete planes and engines a year. The whole Japanese aviation industry, it is believed, can

turn out 5,000 planes a year. Maybe more during war times.

Like the United States, Japan has both an Army and a Navy Air Service. The Naval aero strength is made up (as we understand it) of eighteen Naval air corps, and there are about 500 planes in each corps. The Army set-up uses the French idea of Aviation Regiments—but we can't figure much from this because there doesn't seem to be any standard number of craft per Regiment. Some seem to have a lot of equipment, others are not worth giving a regimental number. In short, we can only attempt to approximate the figures.

Japan's progress in development of aircraft is equally as mysterious. Few photographs of anything really modern have come out of Tokyo in years. Even the

(Continued on page 74)

No longer can those bloody Soviet-Nippon clashes on the Outer Mongolia frontier be passed off as simply "border incidents." As we go to press, troops, tanks, and artillery have seen action. And more than 200 war planes have fought in the air at once! Yes, that's a real international scrap in any man's language.



On the Light Plane Tarmac

SOCIETY FLIES—AND DARNED WELL!

YOU KNOW, there's a *real* aero club out on Long Island! It sits in the middle of the potato patches at Hicksville, has two hangars, a bunch of swell planes, and a membership that reads like the reservation list at the celebrated Rainbow Room. It's called the Aviation Country Club.

Comprising a large landing field a cottage-like clubhouse, a swimming pool, and a number of tennis courts, above all it boasts a flock of aircraft and members who actually fly 'em—fly 'em often and with little or no publicity. They're the type of airmen who take their sky-going straight and don't bother meanwhile to get their pans publicized in the cigarette adds. They buzz their ships north, fly 'em south, and take trips into the west. And they're sensible enough not to attempt to fly east—across the Atlantic.

Of course they have money and can afford to ignore publicity. They can purchase good planes and have them properly serviced and housed. They can get the best and *know* it is the best. And they fly because flying definitely fits into their lives.

But don't worry, we're not going "society" on you. We simply want you to know how the upper crust gets in its airmanship.

At the Aviation Country Club, you will find many women pilots who are really expert. F'xample Mrs. Grover Loening, Mrs. Jimmy Mills, who was the former Alice DuPont, Mrs. John B. Gillies, Jr., and Mrs. Allison Gilles, who, in addition, is also president of the Ninety-Niners, the only real large-scale flying organization run by women in the United States.

The famous Mrs. Harrison Williams, often named No. 1 best feminine dresser of the world, has a plane at the Aviation Country Club and often takes her amphibian off from the water in front of her home in Oyster Bay.

Another newcomer in the ever-growing sport job field is this Akron Aircraft "B" machine, twenty of which are being turned out for a Cleveland dealer. It's made by the Akron Aircraft Company, which has a plant near the Akron Airport. What power has she got? Oh, yes, she mounts a 65-h.p. water-cooled plant designed by the same firm. Otherwise, we don't yet know much about her.

Planes commonly seen at the Aviation Country Club are Wacos, Stinsons, Cubs, Aeroncas, twin-engined Grumman amphibians, a Lockheed-14, and many others. The president of the outfit is Robert G. Payne. Luis De Florez and Thomas Eastman are vice presidents, while Rudolph Loening and Garrison Norton are secretary and treasurer, respectively.

Other noted members operating planes there are E. Clinton Towl, John W. Gillies, Paul F. Nagle, Roland Palmedo, M. A. Gilmartin, Jr., Miles H. Vernon, James B. Taylor, Wallace Bird, Robert Olmstead, Charles Shipman Payson, and Charles Carey Rumsey. Likewise, there's Earl D. Osborn, of Edo aircraft pontoon fame, who used to be Editor Herb Powell's boss on the old *Aviation* magazine.

This outfit is no passing fancy, either. It's ten years old this year, and they staged an air meet celebrating the anniversary that would have done credit to the Army or the Navy. A short time ago, also, they put on a New England rally. Flying from the various fields and flying boat basins around New York and Long Island, they headed first for Lake Winnepesaukee and eventually wound up at Moosehead Lake in Maine where they all stayed for a week of fishing, swimming, and hangar gossip. More than 20 planes took part.

Going somewhere is real flying. And whether you're a Social Registerite or just one of the members of the Leaky-Tank Aero Club, you should try to advance your skill and get into the "go somewhere" group.

The fellows who are in this "tourist" class are the boys who are showing the way toward progressive public aviation, and you can thank the Aviation Country Club for exhibiting how it's done. And right here we say there's no goofier idea than the backward belief that genuine aviation comprises down-at-the-heel derelicts who somehow get a plane, cover themselves with grease, borrow a tank-load of gas, and go kiting into the sky to fly the Atlantic or to create some silly record that means absolutely nothing and does less to *really* advance public interest in aeronautics.

Society Flies—And Darned Well!

A Tale For Camera Fiends



SPEAKING of the latter, we have just received details about a young man in California who for some unknown reason made 140 take-offs and spot landings all in a period of an hour. The gentleman in question even went so far as to have a set of photo-static copies of the signed affidavit made for submission to newspapers and aviation magazines.

We certainly do not profess to be know-it-alls in this game. But we can't help asking this question: What in the name of all that's holy has a record of 140 spot landings made within a period of an hour got to do with the advance of aviation? To us it proves nothing, except that the plane involved had a good tail-skid and throttle—and that the pilot apparently had nothing else to do with his time but take off and land. Each take-off and set-down, according to the information received, took an average of 25.72 seconds. Maybe *you* can see the point in this. If you do, put *us* wise.

Anyhow, if there is something in that gag, we think some automobilist ought to get in on it by riding around a track and going from low to high speed and back to a full stop so many times in an hour—or a year.

According to what they told us, this up-and-down aero demonstration was supposed to "further interest in light planes and private flying," although we can't visualize hundreds of interested spectators enthusiastically watching such antics. The stunt was carried out early in the morning, as a matter of fact, before most of the public was even out of bed. So just how it boosted the appeal of light plane flying is a mystery. Of course, certain types of people go gaga over six day bicycle racing, but the people who've made biking the healthful, universal sport that it is are another class entirely.

Anyway, they don't do things like that at the Aviation Country Club. Instead, safe and sane air rallies are what they go in for. Circus stunts and grandstanding isn't in their line.

Come to think of it, the *real* pilots of our light plane circles are *all* like that. They are too busy—getting in time, taking new courses, and thinking up progressive ideas—to worry about publicity or headlines. We remember that a very good pilot once said: "My motto is 'Never mind the publicity.' I don't want to be the best known pilot in the world—I want to be the *oldest*."

That was ten years ago. He went through the World War, came back and carried on—and he's *still* flying.

If we told you his



You've simply got to get used to these new-fangled undercarriages—for they're cropping up everywhere you look! This three-wheel retractable gear job is the Engineering & Research Company's new Erco 1L4-116 model, which is slated for the low-priced field. Sporting a Lockheed Electra-ish tail, she appears to be powered with a 55-h.p. inverted, air-cooled engine. What more do you want for your money?

name, you'd say: "Nope, I never heard of him." And you probably never will—because he's a sensible flyer.

A TALE FOR CAMERA FIENDS

THIS MONTH'S two-buck epistle is something unusual, because it is a flying lesson taken from a different angle. It comes from Stanley Lansbarkis, of Bradford, Ill., and we'll say right here that we think you'll get a big kick out of it. It is not a long letter, rather something of a short-short. Anyhow, we hope that our readers who go into the air to snap pictures will carefully think over what they read below, because there's a real lesson to it. Lansbarkis writes as follows:

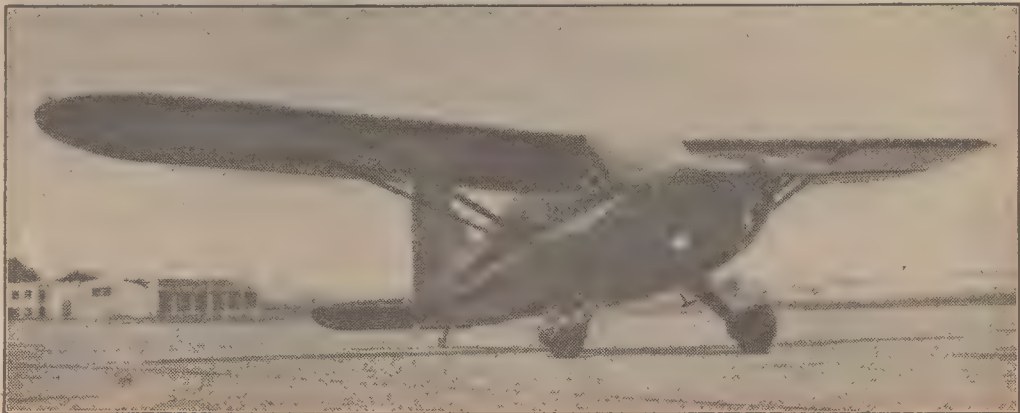
Light Plane Editor:

Having been a regular fan of FLYING ACES for the past two years, I have always read the letters published in the "Tarmac" with decided interest. They are always good and usually written by men who experienced thrills while flying.

Thinking about all this, I realize that my own

(Continued on page 73)

And now here we run our eyes over that swell new Stinson we were telling you about last month—and we also take a look into her cockpit. Originally tagged the 105, she's now known as the Stinson HW75. A 75-h.p. Continental engine powers her, and she carries two persons side-by-side, with a seat for an additional passenger in the rear. As for that auto-like dashboard, you'll have to go a long ways to find anything neater. That push-pull rod in the center is, of course, the throttle. Think you could fly 'er?



Youth M^OV^EM^EN^T A^IR News

Here's our bright new clearing house of info regarding the CAA pilot training program and kindred subjects. Brief, newsy bits—of interest to casual fans as well as actual candidates—will be our specialty. Above all, this is your page. So if you've applied to be one of the 20,000, let us hear how you're making out.

They Want Trainers

There's a grand opening for some smart young man who can design a cheap, safe, easily-maneuverable light plane for training purposes. They were checking over 17 different types at Wright Field, Dayton, Ohio, a short time ago—and most of them were washed off the list without taking the air. The big fault with those that did get up was that they'd spin at the darndest times. Others, load up to 2,000 pounds with all sorts of trick gadgets, hadn't enough power to suit the brass hats. Have you a little trainer in your bean?

Is It Safe?

Seems that it is pretty much so. For from the record to date of the plan to train 20,000 skymen under the CAA, there's little to be questioned regarding the efficiency of the safety measures. Nearly 10,000 hours had been logged before they had a serious accident. This misfortune occurred at the Bendix Airport in New Jersey where the New York University sky squad is training. A member named Paul Fabers suffered the crash—a fatal one, sadly. Yes, another spin.

Purdue Still Ahead

The air team at Purdue University, Bloomington, Ind., continues well in front of the rest of the field in the CAA college flying plan. At last reading, they had run up 1,906 hours, soloed their full quota of 50 students, and also chalked up an additional 36 tests passed.

More Jack For the Navy

Appropriation of \$9,994,000 for the Naval Reserve has been announced—and that should help a few more worthy air-minded fellows to get into the navy blue with wings. If you're interested, get in touch with the U.S. Navy Bureau of Navigation, Washington, D. C.

Physical Not Too Tough

You needn't fear the Air Corps medical exam if you're certain you're reasonably fit, according to a statement

made recently by Lieut. Col. Robert K. Simpson, Senior Flight Surgeon at Mitchel Field, Long Island. If you can pass the ordinary Army test and have good eyesight, suitably perfect muscular reactions, and a good sense of balance, you can get by a flight training exam. And in certain cases of minor eye trouble which can be corrected with glasses, they'll let you by. The best tip is to consult your own family doc first.

Collegian Air Slants

A check-up on the college men who have thus far taken the CAA sky training reveals some interesting facts. Here's the average viewpoint of the higher-ed men: They don't believe they're headed for the Army Air Corps. They plan to continue flying on their own after they get out of college. They have little idea of trying to get into the Air Services because they plan to follow whatever profession they are presently studying at school. They think getting private pilot licenses for only \$60 a head is swell stuff—which it certainly is. They don't care too much for the "flivver" planes they are learning on; rather they intend to buy larger and more powerful jobs when they get out of school—if they can earn the money. About half of the studes on the CAA plan are taking aeronautical engineering courses; few, however, considered taking flight training until the CAA program was launched.

CAA Plan Ignored

We'd like to know why the newspapers and periodicals have put the soft pedal on the CAA air training proposition. We carefully clip the various publications for aero items to keep our files up to date, but for months now we've found practically no mention of the activities and progress of this fine plan. Of course, many of the air schools which didn't get in on it aren't too happy about it; and some of the manufacturers, especially those whose craft weren't favored, aren't doing any cheering. The pacifist elements, too, have stuck up their noses at it, we suppose. And perhaps their weight is felt in certain quarters. But a plan which involves the training of 20,000 pilots is certainly news of some sort.

Vultee Hush-Hush

Some of you CAA birds may one day advance to the place where you'll be flying the Vultee XP-48. You've never heard of that job? Well, they have some swell pictures and drawings of it in the better European air mags—as usual. But American publications are told to keep hush-hush on it. We'll inform you, however, that this Vultee is a veritable flying arsenal. Could you take care of ten machine guns? You see, they have four m.g.'s in the wings, two others in the nose—and four more in the tail firing rearward! How's that for a fiction-writer's "dream ship"? Just bring on them there Martians, huh? Yes, the pilot can shoot all those weapons singly or at once via a special selector switch fitted in his pit.

Sham Battle Disappointment

The big war games to be staged by the Army in the Plattsburg, N. Y., area August 13 to 27 have been beautifully planned—except that there's to be almost no air activity connected with the show. As we get it, only a couple of Observation squadrons are to get into the action; in short, the Attack, Pursuit, and Bombardment outfits haven't been invited to the party. They're bally-hooing this display as the "greatest mass gathering of troops in American peacetime history"—yet they're only calling in a couple of Observation units to help out! We'll bet our flying fighters wouldn't be forgotten like that if we had a unified American Air Service.

HAPPY LANDINGS

BY ARCH WHITEHOUSE



"Let's Have a Unified Air Force!"

So pleads Arch Whitehouse, who in this department is given free rein to express his personal aero opinions. "For," says this popular writer, "the air is a separate sphere—just as is the Army's land and the Navy's water—hence skymen belong in an independent unit that's free to carry out its own destiny."

I SUPPOSE I'm sticking my chin out again. But, as some poet has said, "If this be protruding the chin, then let us make the most of it!" To get right to it, I have come to the conclusion, after considerable thought, that any Air Service that is split up between the Army and the Navy and subordinated to them can only be approximately 60 per cent efficient.

Now then, the United States Air Service is divided among the Army, the Navy, the Marines, and the Coast Guard. And will someone please stand up and tell me why the Marines have to have a separate Air Service? Or why the Coast Guard has to have a separate Air Service? I mean attacking and defending air services.

In this year of 1939 a sky force is no longer simply a scouting organization for the benefit of the Army or the Navy. It is an important military arm which today provides the first line of defense, whether the Navy likes that statement or not. Why, then, are Navy rear-admirals—who probably have never been off the ground—vested with full command over air groups? To go further, what does the average Army general know about flying or aero weather conditions? His job is on the ground, just as the admiral's is on the water. The air is a different sphere—and fighting activity in it should be commanded by airmen.

I am for a unified air service because I believe the air arm should be a separate service and not a glorified scouting service for the Army or the Navy. Billy Mitchell was right. I believe in a separate air unit that's free to carry out its own destiny.

It is quite true that flying men do work in connection with the Army and the Navy. They do artillery shoots and ground contact work. They spot for the Navy and attempt to sink enemy vessels with torpedoes released from torpedo-bombers. But these connections do not in any way justify complete authority over the Air Service by the Army or the Navy.

The prime duty of any Air Service is to assume complete command of the air under all circumstances. They must first sweep the skies of all enemy air effort. Until this is done, the Army and the Navy is more or less at a standstill. Once the fighting forces of the Air Service take command, then, and then only, can the Army Co-operation planes go to work and do their spotting or attempt to take pictures of the enemy ground defenses. Likewise, if the sky fighters do not drive all

enemy air threats out of the ocean skies, the patrol bombers cannot get through to do their work and there is no chance for the lumbering torpedo-bombers to attack enemy surface vessels.

When the Great War broke out, nearly all military aviation was simply a part of the Army and used as such. The American Air Service was then part and parcel of the U.S. Signal Corps. When asked why naval flying men should not be drafted into a separate air service, Josephus Daniels, one-time Secretary of the Navy, made the prize retort: "Of course not! We might as well consider a separate service for our submarines!"

The comparison is ridiculous. Submarines are moved about in water, so it's natural that seamen should man them. And since airplanes use the three-dimensional air, they should be commanded and handled by airmen—not sailor-airmen or soldier-airmen. In the final

analysis, there should be no such hyphenated service man. Our military flying men should not be both sailors and flying men.

Air bombing is not winged artillery, Army officials' opinions to the contrary. It is an entirely different art, because the act of dropping a bomb on an enemy position demands the combination of a fine machine, a suitable projectile, and skill and courage of a human being—the military aviator.

What can an Army artilleryman understand about air bombing? His job is artillery ballistics, the movement of batteries, and the very technical business of finding a range and firing a gun.

NOT SO our bomber pilot. He must know airman-ship, aviation, sky fighting, and the taking of sights on targets from airplanes—moving platforms. He must add to all this the final and most important factor—his own personal courage to fight through and then remain cool and collected under anti-aircraft fire until he has emptied his bomb racks.

What can an Army man, trained for authority over a battery of guns, know of all this? Why then should such groundlings have responsibility over a sphere other than their own? We say that there's no logic whatsoever to such a system.

Up until a few weeks ago, the British had a unified air service known as the Royal Air Force—the third arm of defense which has rightfully been considered important. This Royal Air Force was born in 1917 by



fusion of the old Royal Flying Corps (Army) and the Royal Naval Air Service (Navy) into a single unit. The incorporation was necessitated because the squadrons of the Royal Naval Air Service, which were under the command of shell-back navy men, were unable to do much of anything about stopping German air raiders. They could only think in terms of battleships. When an emergency arose, they could not think in terms of fighting planes.

The result was that almost no orders were given, and there was a time when German raiders were flying all over the place utterly unmolested, because no Navy man seemed to have the sense to send Navy planes up after them. But when the two forces were merged and placed under the authority of a separate air organization, the air raids were stopped cold over the East Coast.

It took air-service minds to give the proper orders, and the history of the attempted raids over Britain in 1918 should be enough to satisfy

anyone that any Air Service should be a completely separate organization.

But, in the last few weeks, the sky branch known as the Fleet Air Arm, a small portion of the Royal Air Force selected for Navy duty, has been taken over by the Royal Navy which has been given full authority over it.

There's the beginning of the end! Any minute now the Army will demand a chunk of the Royal Air Force as its own particular piece of property and we'll see the Royal Air Force broken up again into three—not two—distinct services. Which would be worse than ever.

I say that no organization can prove its real worth divided in this manner. An Air Service must be a compact and complete unit of its own. No matter whether certain squadrons have to do Army Co-operation work or Naval Co-operation work, the Air Service is too big, too specific in its duty, to be thus hampered by the Army or the Navy. The Air Service is first, last, and always

a fighting unit, and the mere fact that co-operation with the other services is numbered among its duties does not justify subordination to those other departments lock, stock, and barrel.

We might as sensibly take the attitude that since the Navy may cover the Army when infantrymen make landings in enemy territory, the Army should take over the Navy and give the orders. We might just as well argue that since the Navy offers protection to Army transport vessels, the Army should take over the Navy. But the Air Service is a fighting force which uses the air as its battlefield. It is completely apart from either the Army's ground or the Navy's water, and it has every right to govern itself. There is no reason why a separate Air Service cannot fully co-operate with the Army or the Navy. But there are plenty of reasons why non-flying Staff officers should have no authority over flying men.

Let's have a separate U.S. Air Service!

The Airmail Pals

LAST MONTH, you remember, we started our contest to see which AP's each month would write the most interesting letters telling what all's gone on between them and their postal friends. Well, letters have now started to come in. And the winning one each trip gets a set of three swell 3-views—Crash Car-ringer's Hale Hellion, Kerry Keen's old Black Bullet (especially famous now that it's cracked up), and the well known Westland Pterodactyl V. Each Black Bullet plan is autographed by Arch Whitehouse, too!

Anyhow, after sorting through the current pile, the ol' R.H.P.D. came across a missive from Jim Foley, of Los Angeles, Calif. And that's the one he tagged for honors. Here's Jim's winning screed—

"New Yorker Eno Stedman and I have been ink-slinging pals for nigh onto three years now, R.H.P.D. You

hooked us up way back when I first started reading FLYING ACES, and we've been great friends ever since.

"Now we haven't done anything that could be called very interesting, but we do swap photos of airplanes in every letter. (In fact, Eno is the guy who tuned me up into singing the hypo hymn in the first place.) And once—when I was a bit more flush than I am now—I gave Eno a long distant buzz on the phone just to see how he was getting along.

"I remarked that we haven't done much, but this year we're going to make up for all our lost time. You see, we're both going to the same summer camp, which is out in Minnesota. And in that way we'll finally see exactly what each other looks like—on top of having a whale of a good time together. Eno's father is going to drive him out to the camp if he can get away from work, and I'm going to go by bus.

"So now, our hands are going to be literally stretched clear across the country to shake right in the middle. Gosh, I'm thrilled at the idea of seeing Eno! Tell you all about it later, R.H.P.D."

There it is, fellows. And are *you* planning anything like that? Well, even if you aren't, you can still win those autographed 3-views. Just sit down and tell the R.H.P.D. what you've done that you'd like to let us all in on. You might not think of anything special at first, but keep trying. And when you finish your letter, address it to "R.H.P.D. Letter Contest, FLYING ACES Magazine, 67 West 44 St., New York City."

Yessir. Come on, boys! Hop to it!

Here's a letter from W. L. Johnston, of Middlesex, England, that's only got his pal's front name on it—the last name and address he doesn't know. W. L. is very anxious to get in touch with his trans-Atlantic friend as soon as possible. So will his Clyde, New York, pal please write to the R.H.P.D. immediately.

That's all this time, lads. Happy scribblin', and may you win the next set of model plans!

—THE RIGHT HONORABLE PAL DISTRIBUTOR

HOW TO GET AN AIRMAIL PAL

FIRST, write the best possible letter you know how. Use your best pen-and-ink handwriting or a typewriter. In your letter, introduce yourself fully—for this is the letter we'll forward to the pal we'll pick out for you. Tell your age, your interests in aviation, your other hobbies, and any additional items that might interest a new friend.

Then on a separate sheet tell the R.H.P.D. what kind of an Airmail Pal you want. Send your letters to Airmail Pals, FLYING ACES, 67 West 44th St., New York, N. Y. Be sure to enclose a stamped, self-addressed return envelope, *plus* five cents in stamps or coin for each pal requested (our fee for the R.H.P.D.'s "Kitty"). We'll try to supply you with a pal in line with your specifications, although we cannot guarantee to fill the bill exactly every time.

Your new pal's letter will be sent to you, and yours to him—after which you will correspond direct.

Do not ask for "lists" of pals. We cannot supply them.

REGARDING FOREIGN PEN PALS

PLEASE NOTE that FLYING ACES' foreign circulation is only in English-speaking countries (specifically, Great Britain, Australia, New Zealand, and Canada). Therefore we cannot undertake to supply you with pen pals in Germany, France, China, etc.

If you are an American resident and want an overseas pen pal, *do not write a pen pal letter*. Instead, send us a short note telling in a general way what kind of a chap you are and what kind of a pal you seek. Enclose a stamped, self-addressed return envelope and five cents for each pal called for. A foreign writer's letter will be sent to you, then you may correspond with him direct.

If you live outside of the United States and want an American pen pal, write a complete letter as described in the first paragraph of this box, and send it *without* the return envelope but *with* an International Reply Coupon worth five cents. Get the coupon from your local postoffice. Your letter will be forwarded to an American correspondent, after which you need only wait for his reply.



WISCRACK-UPS



Taxi in on this runway and pick up a plane load of laughs! In this department, we present a collection of jokes, cartoons and humorous verse. For all original jokes which we can use here, FLYING ACES will pay \$1. Contributions cannot be returned. Address all letters to WISCRACK-UPS.

NEW RECORD

Little boy (with head out window during joy hop): Boy, wait'll the gang hears about this!

Father: Hears about what, son?

Little boy: That I can spit 6,000 feet!

HE JUST COULDN'T

Passenger: If the chief mechanic had his head cut off by a spinning propeller, what would you do?

Fellow in overalls: Nothing.

Passenger (surprised): Nothing?

Fellow in overalls: Nope. You see, I'm the chief mechanic!

Dumb Dora thinks decalage is the angle between the chord lines of two or more wings of a biplane or multiplane when the wings are not mounted at the same angle. And for once she's right!

CANDID AD

For Sale: One 1936 sport plane. In first crash condition.

NO KICK-BACK NOW

Spy master: Fine! You've copied the blueprints of the secret XQ27K-78 pursuit plane! But what do you mean, your conscience doesn't accuse you?

Spy: Why should it? I just jotted down at the bottom, "Any similarity of these plans to any other plans is purely coincidental!"

GOOD IDEA

Inquisitive bystander: What's the name of that old plane over there?

Ackemma: Junker.

Bystander: Yeah, why don't they?

Then there was the pilot who fitted his Flying Flea with pontoons so his small son could play with it in the bathtub.

TOO BIG

Joe: Why don't you go to the World's Fair by bus and then take an airliner home?

Jim: I would—except that I haven't room for it at home.

DEFENSE MANEUVER

C.O.: And what steps would you take if the enemy raided us?

New pilot: Long ones!

AIRMINDED PLUS

Teacher: Now, Henry, tell us just what you mean when you say you're airmininded.

Henry: Well, I'd rather be Wright than president!

LET US WEEP!

Leo McDank, while doing a bank, Pushed on his throttle and stuck it; And alas and alack, since it wouldn't pull back,

Poor Leo has now kicked the bucket.



Dumb greaseball: "What's eatin' ya, Sir? Didn't ya tell me to check your ship?"



"Good grief! That blamed laundry put in too much starch!"

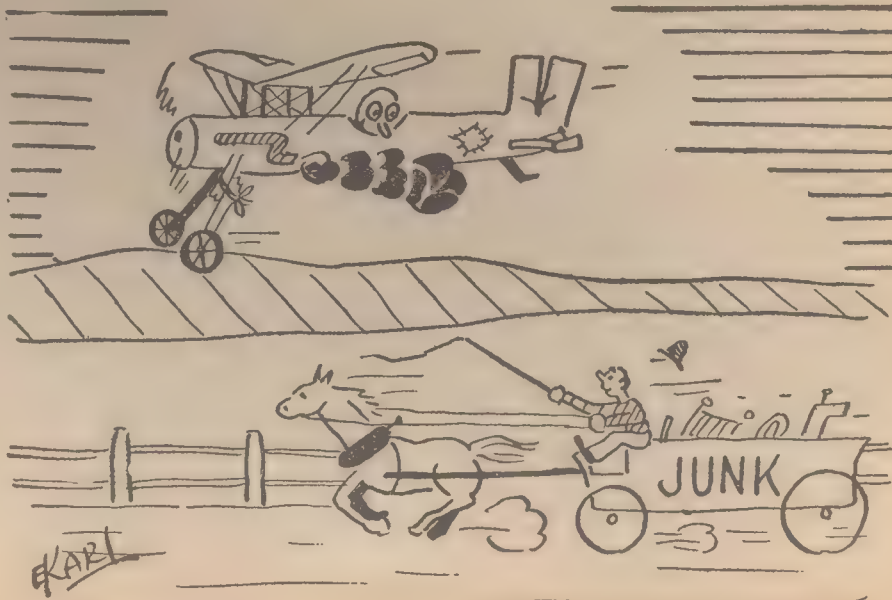
TOUCHE!

There once was a fellow named Bootch, Quite fond of imbibing the hootch; He went up in a Spad, Tried to land, and b'gad! Now he's lower than beetles and sooch.

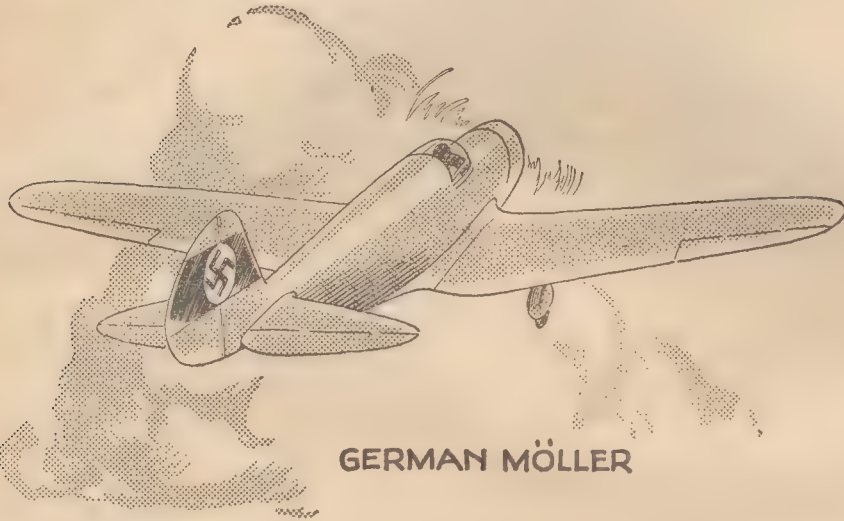
HE "TOOK TO THE WOOL"

First jumper: You say you had a bad accident the first time you used a parachute?

Second ditto: Plenty bad! I pulled my zipper instead of the rip cord—and my pants came off!



Modern Planes Album



GERMAN MÖLLER

GERMAN MOLLER LIGHT PLANE

IT IS PLEASING when we get news of late German jobs that are *not* being pointed out as super-deadly machines of war. We got just such news this month—and it pertains to a fine sport craft which we feel our readers will find of much interest. Listed as the Moller Light Plane, it's manufactured by H. G. Moller, a young designer who has a factory at Bremen. The full address, if you want to know, is Erlenstrasse

107, Bremen, Germany.

This light ship is powered with a 53-h.p. Zondapp engine which gives it a top speed of 115 m.p.h. The Zondapp power plant, we must admit, is a new one on us.

The Moller is a single-seat machine incorporating excellent spruce and plywood structure. The fuselage is oval monocoque built up on three main longitudinal members and incorporating a number of closely spaced frames. This framework is

covered with fine plywood and the main bulkhead is fitted to the center-section spar.

Of cantilever construction, the wings are built in three sections. The main, or center, section is built integral with the fuselage and the outer panels are equipped with quick-release fittings so that they may easily be removed to facilitate storage or shipping. Outer panels are elliptical and slightly swept back. The center-section has a marked angle of anhedral and the outer panels a slight dihedral. Ailerons are built up on a wooden frame and covered with fabric. Landing flaps of like construction are set between the ailerons and the wing roots.

In this job, the empennage is of the usual monoplane type, with a single-spar tail plane covered with ply-wood and carrying a fabric-covered rudder. The fin is built integral with the fuselage and the rudder is fabric-covered.

Covering the cockpit is a hatch of quick-release type, and the pilot extends his legs through the main bulkhead to reach the rudder pedals. The rear bulkhead is slanting and has a cavity to take a regulation-size parachute.

BRITISH WELLINGTON MARK II

ABOUT A YEAR AGO we presented the Vickers Wellington bomber, then a newcomer to British military aviation. It was derived from the earlier "Wellesley" long-range bomber, which also used the so-called geodetic structure system. In this original Wellington, we saw a mid-wing monoplane powered with two Bristol "Pegasus" engines and equipped with nose and tail turrets—all in all presenting a formidable appearance of military efficiency and sturdy dignity.

Recently the Royal Air Force was offered another plane in this series, the Wellington Mark II bomber, with which we are here concerned. In this model, we see much of the same staunch design. However, the engines are now supercharged Merlins of a type which still seems to be something of a secret.

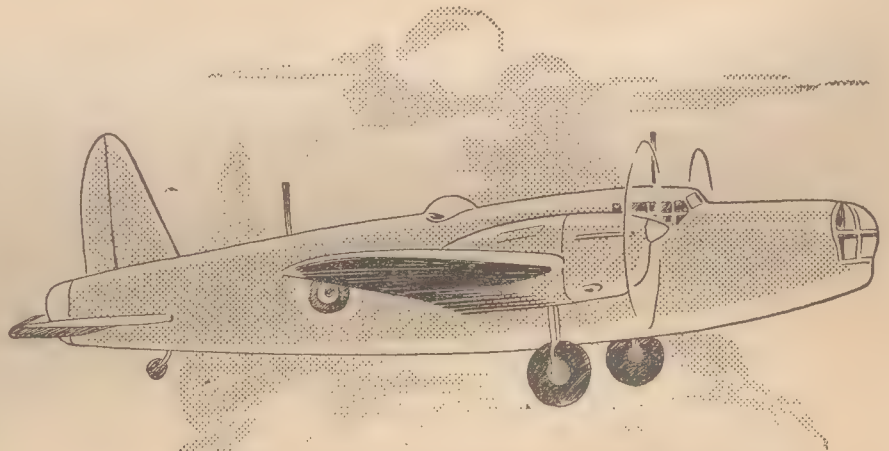
The Mark II appears to be designed for range, for the details we have received indicate that it can strike at greater distances than any other bomber at present in the British service. If we take this as fact and consider that the range of the service Wellesley is about 2,000

miles, it is obvious that the new Wellington must do well over that.

In addition, the new Wellington carries five machine guns. The nose turret has been changed into a slightly more bulbous style, while the tail turret, set behind the single-fin and rudder, appears to be of the new Frazier-Nash type, thus probably offering more vision. They have also added something new in the way of an observation dome for the aviator. This is set in the roof of the

cabin and about on a line with the trailing edge of the wing. The motors, which are beautifully streamlined into the wings, have the new ejector type exhausts.

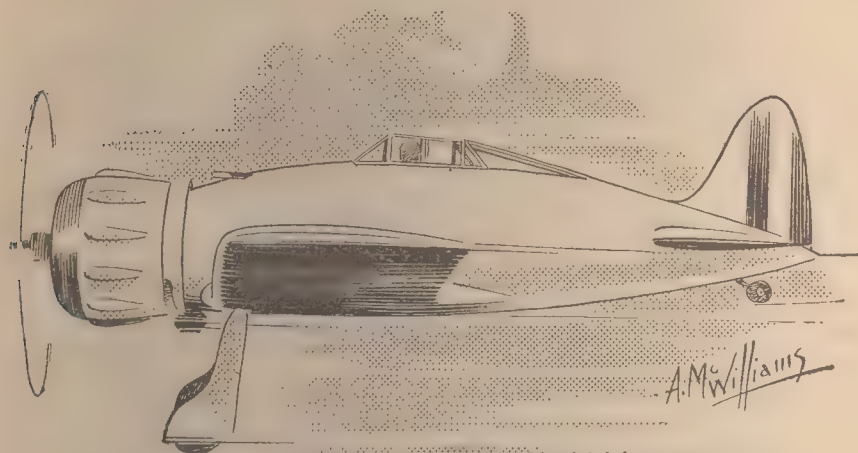
The original Wellington had a top speed of 228 m.p.h. at 19,000 feet. With the power apparently boosted in the Mark II to something nearer 3,000 rather than the original 1,600-h.p., the new model should hammer through the skies at something like 260, at least.



BRITISH WELLINGTON MARK II

THIS GRAPHIC REVIEW BRINGS YOU—

the striking Italian fighter that was dived riskily close to Il Duce's head, a new German job that's NOT military, Britain's special super-range bomber, and a swell new Porterfield light plane.



ITALIAN MACCHI
C.200 FIGHTER

ITALIAN MACCHI C.200

W E SELDOM get an opportunity to give out much information on Italian military planes, but recently a group of aero correspondents had an opportunity of visiting the Italian Air Service research center at Guidonia, where a special flying display was given and where Il Duce himself took the boys for a hop in a Savoia bomber. It is interesting to realize that at least one leader of a first-rate power has

actually learned to fly—and so well that he takes a number of correspondents up in a large modern war plane.

After the review, nearly all of the correspondents raved about the brand new Macchi C.200 single-seat fighter. It was put through a series of stringent tests and striking maneuvers, and such a display is seldom offered other than to aero brass hats.

This Macchi fighter is powered with an 850-h.p. Fiat radial and has

many of the features of the British Gloster multi-gun fighter. It boasts a top speed of 315 m.p.h. And, according to Italian authorities, it has been “energetically pulled out” of a 10,000 foot dive at 500 m.p.h. As a matter of fact, while diving at about 400 m.p.h., during the review, the C.200 was boldly yanked out of the plunge less than thirty feet from the ground—right above Mussolini's head! Thereupon, it was sent into a wild zoom on the top of which the pilot did a flick roll. He added a grand series of loops, stall turns, and other maneuvers to indicate that the plane was comparatively simple to handle.

The Macchi C.200 is a low-wing monoplane with a covered hatch set well back from the trailing edge of the wing. The engine has what is termed a helmeted cowl, also a three-bladed variable-pitch propeller. Retractable landing gear is a feature, and four normal-caliber machine guns are carried.

This job has been designed for fighting, has a ceiling of 35,000 feet, and reaches its power maximum at an altitude of 12,500 feet. The span of the wing is 34 ft. 8 in. Full production of the plane is now underway at the Aeronautica Macchi plant.

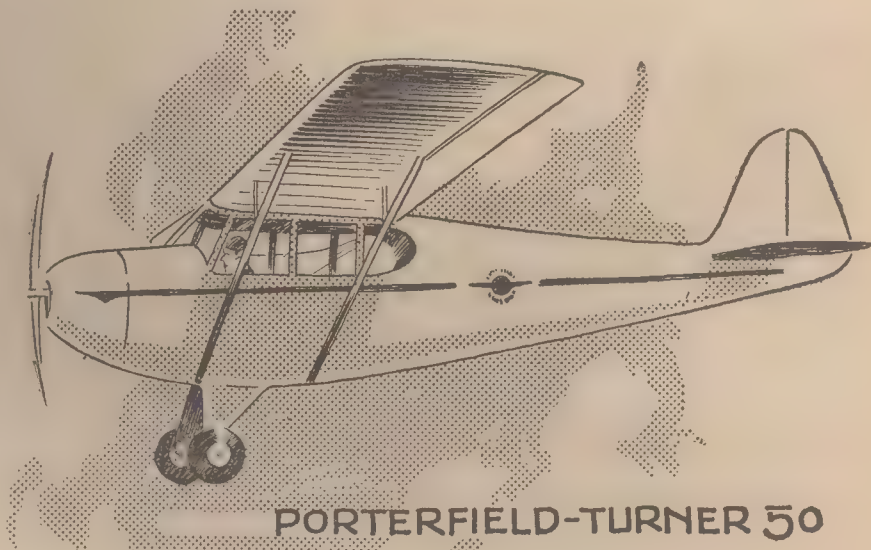
PORTERFIELD-TURNER 50

LIGHT PLANE FANS, here's something good: We've just discovered that the Porterfield Aircraft Corporation—of which Roscoe Turner is now a Vice-President and which has its factory at 1726 Wabash Avenue, Kansas City, Mo.—has come out with a new plane of the Porterfield line. What's more, Roscoe's famed name has been included in the new craft's tag. This ship is the Porterfield-Turner 50.

That this firm is going to town is also noted in the fact that production of other models using 65 and 75 h.p. engines is contemplated. A special two-seat trainer is also on the books.

The P-T 50 is a high-wing monoplane powered with the 50-h.p. Continental engine and built along the usual light plane lines. Its wing, braced with two lift-struts instead of V-struts, is built up on spruce spars with steel tube tips, a dural leading edge, and fabric covering.

Welded steel forms the fuselage, and the tail assembly is braced by wire. Tandem seats are found in the cockpit, which is entered through a fairly large door. The interior is completely finished in synthetic grain



PORTERFIELD-TURNER 50

leather, and upholstered parachute seats are featured. The instrument panel is conventional, and behind it is set an 11-gallon tank for gasoline. There is a luggage compartment aft of the rear seat which accommodates about 30 pounds of luggage.

The general equipment includes dual-stick control, brakes, a non-glare instrument board, and large

windows. Performance figures are not as yet available. This plane can be bought for \$1,495 cash, and a time-payment plan is offered.

Now that light plane manufacturers are turning to the “We'll give 'em what they want” attitude, interest has been considerably stepped-up in this field. Now it shouldn't be long before the price comes down also!

Flying Aces Club News

"Hi-Yo! Silver! A-w-w-way!" That's right, beat it, Silver, because those horsey days are gone forever. Instead of hoppin' in the old saddle, pardner, we're shippin' aboard the sleek Flying Aces Transport and are off to scour the country to corral a flock of F.A.C. news. And—why, Clint Randall's back already! With a top-hand batch of Club dope, too—

IT'S STILL dry as a cracked tail-skid in New York—for not a drop of rain has fallen in several weeks. The drought is on in full swing, but, fellows, letters are really *pouring* into G.H.Q.! And here we go on another gab session to tell you lads all over the world just what those welcome missives are all about. Contact!

To start the ball rolling, let's quote part of Stephen Mayne's letter. Steve, who lives "down under" in Sydney, Australia, says:

"Your mag has one more regular reader now. Until a couple of months ago, it was just good luck that I ever got a copy, but now I have a news-agent who gets me an issue every month. The Club News is one of the best items in the book," he continues.

We're glad that you're gettin' your F.A. regularly now, Steve. It's swell that you've hooked up with a dealer who'll nab one for you every month.

Incidentally, Steve would like to get in touch with other Clubsters in Australia. So why don't you fellows who live in or around Sydney drop him a line? His address is 26 Springdale Road, Killara.

Joe "Ham" Johnson, of Astoria, N.Y., was in the office the other day to say hello to the staff. Joe told us that he had just been up for his first hop, and the way he explained it was something like this:

"Gosh, Clint, I never realized it would be like that up in the air. The needle on the speed indicator said we

By Clint Randall

National Adjutant, Flying Aces Club

were going almost 200 m.p.h., but it seemed to me like we were just standing still! And when I looked down at the ground, the people appeared like ants. Boy, what a thrill!

"But it was best of all when we came in for the landing," he went on. "The pilot cut his gun over Mitchel Field—we were flying from Roosevelt Airport—and then stuck the old nose down in a gentle glide. He blurped the engine a couple of times to keep it clear, then side-slipped right over the golf course. And those golfers below were so close that I thought I'd almost be able to reach out and touch them!

"About ten feet from the ground, the pilot whipped her smoothly out of the slip and straightened to touch his trucks. Then he taxied her right up to the line all set for another load of passengers."

We know how it feels, Joe. Yes, we'll bet, that now you've had that first hop—the one that broke the ice—you'll want to keep going for more. Right, pal? And every time you go up it'll be better. Just wait and see if it isn't!

Personal to Bill Wyatt, Camden, N. J.: You're the second fellow this month, Bill, who asked for plans of a flying zeppelin. And just as we told Steve Watkins, of Cape Town, South Africa, we no can do. You see, helium is too hard to get and would be too expensive anyhow for the average builder and therefore an explosive gas would probably have to be used. And there's too much of a chance that some of you lads would get your pants burned off with something of that sort. On top of that, the bag of the zep would have to be made absolutely air tight to keep the gas from escaping, and that would be a heck of a job to accomplish. See our pernt?

Now for another letter: "I'm one of those poor unfortunates who lives way out of the modeling country," says Mervyn Westgate, of 113 West Pipestone Ave., Flandreau, S. Dakota. "The nearest club is forty miles away and I can't get there to join. Only a few kids in town build models and they don't make them for the aviation value they could get out of them. They build them, and in just two or three days the ships are with Luke, Richthofen, and the rest of the World War boys who went West. What's more, they don't (the models, I mean) fly more than fifteen seconds, which makes me feel sor-

(Continued on page 62)



Ten years ago the first transcontinental "air-and-rail" flight was inaugurated by the old T.A.T. line, starting from East to West, on July 8, 1929. And this summer the T.W.A. "Sky Chief" celebrated the tenth anniversary of that flight—which required 48 hours by airplane and railroad—by flying on regular schedule from coast to coast in 15 hours. Upper left shows Charles A. Lindbergh, just before he took off on the first eastward flight from Grand Central Airport at Glendale, Calif., with Mrs. Lindbergh and Mary Pickford, who flagged the plane off the runway. At the upper right is the "City of Columbus" which made that first flight from East to West. The map shows the two routes—ten years ago and today. And below is seen the modern "Sky Chief" winging its way through the clouds from New York to the Pacific Coast.

JOIN THE FLYING ACES CLUB

Honorary Members

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Vice Pres. John Nance Garner

Casey Jones	Rear-Admiral Byrd
Wallace Beery	Capt. Eddie Rickenbacker
Al Williams	Colonel W. A. Bishop
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Maj. A. W. Stevens	Major C. C. Moseley
Capt. O. A. Anderson	Clarence D. Chamberlin
Major Fred Lord	Mrs. Charles S. Baylus
Lieut.-Col. Theodore Roosevelt	

Official Charters

F.A.C. Flights and Squadrons are recognized at GHQ only after they have received their official charters. These illustrated documents, printed on fine paper and portraying various features in the field of aviation, are excellent for framing and display. Their inspirational text is in keeping with the high ideals and aims of our Club. Each charter application must include a full list of proposed group members and their addresses. Each of these members must hold his regular F.A.C. card, obtained by clipping and sending in the membership coupon printed on this page. If applications are approved, Flight Charters are issued for 25c, and Squadron Charters for 50c. Send the correct fee with your application. It will be returned if the Charter is not granted.

WIN YOUR WINGS
Save This Whole Coupon for
CADET OR PILOT
insignia of the F.A.C.



All members with Official Membership Cards are eligible for Cadet Wings. This coupon, with two others and 10c, entitles members to Cadet Wings. Do not send this coupon alone. Save it until you have three. Then send them in all together with a self-addressed envelope and 10c to cover cost of wrapping and mailing.



All enrolled members who have won their Cadet Wings are eligible for Pilot's Wings. This coupon, with four others and 10c, entitles Cadets to Pilot's Wings. Do not send this coupon alone. Save it until you have five. Then send them all together with a self-addressed envelope and 10c to cover cost of mailing.

Send the Whole Coupon

regardless of which kind of wings you wish. Separate sets of coupons are needed for each insignia. Canadians send 15c, or three International Reply Coupons. Overseas readers send 1/-, or five Reply Coupons secured at the Post Office. Only one pair of either kind of wings to a member. If yours are lost, send 25c for new ones (2/- overseas). [109]

Do Your Full Share to Advance Aviation

TO advance the cause of aviation, over 50,000 men and women, boys and girls, have banded together to form the FLYING ACES CLUB.

It is the easiest club in the world to join. Just clip the membership coupon, fill out, and mail it to GHQ with a stamped, self-addressed envelope. Your official card will then be forwarded to you. After joining, you can quickly win promotion and the right to wear the various insignia of the Club.

In the FLYING ACES CLUB there are two kinds of local organizations, known respectively as Squadrons and Flights. A Squadron must have eighteen members, including its leader. A Flight must have a total of six. You can start either of these groups in your own community by enrolling your friends in the Club, then applying for an official charter as detailed in the column at the left. Each member must hold an F.A.C. card.

Meetings and activities are conducted among the squadrons and flights according to the wishes of the members. GHQ has established no rulings in this respect, nor are there any dues or red tape whatsoever. The entire idea of the Club is a common meeting ground in an international organization for the lovers of aviation in its various phases. Many local Squadrons and Flights hold regular contests and public events. Many hold weekly meetings for model building, and instruction, and even regular flight training.

Awards and the Aces Escadrille

After the membership card, and Cadet and Pilot's wings, comes the Ace's Star. This is awarded for enrolling five new members, using, of course, a separate coupon for each. As an Ace, you are then eligible for membership in the FLYING ACES ESCADRILLE. Then you may win truly handsome awards. Among these are the Distinguished Service Medal and the Medal of Honor, two of the finest decorations that have ever been designed.

Any member who has reached the rank of Ace is eligible for membership in the FLYING ACES ESCADRILLE, an advanced organization which replaces the old G-2 unit and opens the way for participation in a definite program contributing to the forward movement of aviation.

To enroll, an Ace must apply direct to Escadrille Headquarters, giving his name, age, address, rank, and highest award already won in the Club, and enclosing a stamped, addressed return envelope. If he is approved for membership his instructions will be forwarded. Membership in the Escadrille is limited to American and Canadian members only, at present.

Special Service!

This Aviator's Positive Identification Bracelet



Registration and Bracelet Only 25c!

A valuable identification service for F.A.C. members is now offered with our World War type aviator's bracelet. Every one now issued will bear a serial number—which is the key to your confidential identification record on file at GHQ. In emergencies where prompt identification is needed, this number may be sent to GHQ, and identification facts will then be furnished. When ordering, send your name, address, occupation and full physical description—age, height, weight, color of eyes, hair and complexion, etc., together with name and address of nearest kin. Overseas readers may receive bracelets and be registered for 2/- in coins or Int. Money Order for same amount.

Keepers of the Log

In order to keep in touch with GHQ, every squadron should appoint a member with a facility for writing as Keeper of the Log. It shall be the duty of the Keeper of the Log to send in regular reports of interesting doings of his squadron. His is an important job, because it is only by means of interesting squadron reports that life can be given to the Flying Aces Club News.

Photographs, too, are an important consideration for the Keeper of the Log. Either the Keeper himself, or any other member with a camera, should keep a photographic record of the squadron's activities, for reference purposes, to show prospective new members, and to allow a selection of pictures to be sent to GHQ for reproduction in our monthly Club News pages.

The cost of film, prints, etc., would be a legitimate charge against the squadron's own treasury or could be covered by members' contributions. A number of flights and squadrons, incidentally, send us prints which have been taken, and completely developed and printed by foto-fan members of the outfit.

Correspondence

In all correspondence with GHQ where a reply is desired, enclose a stamped, self-addressed return envelope with your letter. GHQ receives thousands of letters weekly, and cannot undertake to answer those who do not heed this rule.

Official Supplies

Due to popular request, we have ordered a new supply of F.A.C. paper penants. These attractive stickers, which have glue on the back so that they may be stuck onto car windows, etc., sell at 6 for 10c, or 20 for 25c.

We also have a new supply of swell embroidered wing insignia that'll look top-notch on your sweater. They're made of the official Flying Aces Club colors, blue and gold, and are available at 25c each. Order now before the supply is exhausted.

(Overseas prices: Penants, 20 for 2/-; wing insignia, 1/6.)

October Membership Application

I, the undersigned, hereby make application for membership in the Flying Aces Club. I agree to live up to its rules and regulations; to foster the growth and development of aviation; and cooperate with all other members in the work of spreading aviation information, building up confidence in flying for national defence and transportation. I will aim to build up the Club and its membership, and do my best to win the honors that the Flying Aces Club offers.

My name is

Age [109]

Street

City State

Do you build airplane models?

Mail this application, enclosing a self-addressed, stamped envelope, Canadian and overseas readers send the application, self-addressed envelope, and an International Reply Coupon worth 5c, secured at the Post Office.

FLYING ACES CLUB, 67 W. 44th St., New York

All Questions Answered

This section of FLYING ACES is at your service. So if you have an aero query, fire away and we'll answer it here. All questions will be considered in the order they are received. For a personal reply, send stamped, self-addressed envelope.

Herbert Grew, Chisholm, Minn.:—Glad to hear that your dad and you are all set to head into gas model building. Good luck! We don't quite understand your question about the Flea, however. How's that again?

Robert Steffenhagen, Palatine Bridge, N. Y.:—The world's fastest airplane at this writing is the German Messerschmitt M-109-R which Fritz Wendel recently flew at 469 m.p.h.

William Cromer, 118 York St., Gettysburg, Penna.:—You'd like a copy of the December 1934 Flying Aces? So would a lot of people, Bill—for they're now mighty rare. But perhaps some reader who has one will get in touch with you.

Bob Cranston, 310 Thirteenth Ave., Green Bay, Wis.:—You, too, wish back copies of F.A.—issues prior to January 1939. (How about it, readers? Can any of you help out Bob?).

Irwin Kenderdine, Jr., Reading, Penna.:—We're pleased to know you've appreciated Hank Struck's "Trail Blazer" models so much. And we expect to have another for us shortly. As for more details on those jobs, that must be left up to you. Try library research.

Paul Canosa, Diamondville, Wyo.:—Many thanks for your explanation and origin of the "Stand to your glasses steady" song. I shall look it up and give credit where it is due. Aside to other readers: According to Reader Canosa, the song used in the movie *Dawn Patrol* was originally written by an Englishman named Bartholomew Dowling and concerned a regiment of British soldiers who were in a foreign country and slowly dying one by one of an unknown plague.

Farnum Robinson, Boston, Mass.:—Thanks for your kind opinion on our story involving both Coffin Kirk and Tug Hardwick. Yes, we may work out another such adventure one of these days.

Clarence Koehn, Norwood, Ohio:—Sorry, but those back numbers you require are not available. Your idea about including diagrams of hide-outs, airports, and buildings

connected with our yarns is very interesting. Perhaps we'll try to get one in some time if we feel that special explanation is necessary. To add the full details of the question as well as the answer would only take up a lot of space which we need badly for other material. I always try to word the answer so that the original question is fully understood. The book the *Red Knight of Germany* is still available at one dollar at the Garden City Publishing Company, Garden City, Long Island, N. Y. R. A. F. means Royal Air Force. Bishop was Canada's leading War-time airman. He now holds the Canadian rank of Air Marshal.

Edward Bomback, Jersey City, N. J.:—Sorry, but we have no more of the Lockheed Electra plans available—no more of those back copies left.

William F. Smith, Fairplay, Colo.:—I am sorry the glider plans you have are not detailed enough for you. I am sure you will do better if you contact the Soaring Society of America, 1909 Massachusetts Avenue, Washington, D. C. From them you will get plenty of good advice and information on gliders and possibly details or suggestions on modern glider plans and construction. The same organization also puts out a fine monthly magazine called *Soaring*.

William Tape, Dorchester, Mass.:—The report that there is Jewish blood in the von Richthofen family has been running rife through Euro-

pean journals for some time now, and it is based on the argument that Baron von Richthofen's grandmother was of the Hebrew race. Records state she was born Marie Seip and was somewhat distantly related to the poet Goethe. Study of the Red Baron's parentage in a modern encyclopedia does not give actual racial details, only mentioning places and dates of birth.

Berton Dowling, Valdosta, Ga.:—Your idea of painting planes a light blue underneath is not new. British planes used in the World War were painted that way, but I can't remember that that made them any harder to spot, even so. Sure, you can contribute original photos to "Snapshots of the War."

Larry Bradley, Portland, Maine:—Sorry, but I happen to know the real dope on that Handley-Page story. So I can't agree with the clipping you sent in, especially since it does not give names or actual facts. In short, fellow, I don't consider that source authentic.

Billy Nusbaum, Harrisonburg, Va.:—I knew I'd get into hot water over that Northrop in my *Hell Over Hainan* story in our June F.A. No, Billy. There is no Northrop like the French Delanne. I just made that up to make a story. As for the Allison people, they are working on a new engine which is supposed to put out about 2,200 h.p., but it's not ready for production yet.

John David Hertzman, Chicago, Ill.:—I think you had better write direct to the Menasco Company, 6714 McKinley Avenue, Los Angeles, Calif., to get the information you want. I do not have all the measurements you require.

Michael Lehr, New York City:—In her ten westward trips from Germany to Lakehurst, the Zeppelin *Hindenburg* averaged just under 64 hours for each trip. The eastward trips (enjoying prevailing westerly tail winds) averaged about 51 hours.

Bob Miller, Melrose, Mass.:—The Do-X had a wing span of 157 ft. 5 inches, and when empty it weighed 66,000 lbs. The new Boeing 314 *Yankee Clipper* has a span of 152 feet and weighs 48,400 lbs. empty.

Lawson Hilder, Philadelphia:—The ships you desire identified are (1) Brewster Navy fighter, (2) Curtiss XP-40.

(Continued on page 62)

And Now We'll Ask You a Few

- 1—What is the angle of incidence?
- 2—Where is Selfridge Field?
- 3—To whom should one write when wishing information on the U. S. Army Air Corps?
- 4—What is the primary qualification of an airline hostess?
- 5—Identify Fred T. Jane?
- 6—What is a kharif?
- 7—State the use of a jettison gear?
- 8—What is an opposed-piston engine?
- 9—What is the real meaning of "streamline"?
- 10—How many British airmen were awarded the Victoria Cross during the World War?

(Answers on page 80)

With the Model Builders



It took Ernest Nagy, of Dearborn, Mich., a full month to build this corking scale replica of the Lockheed 14. But we think it was time well spent. And you can clearly see why this craft is dubbed "Our Model of the Month." She's a lulu!

Right: Here we have a swell right shot of a De-Havilland 4. Sent to us by D. Moore, of London, Eng., this model incorporates all of the fine details that experts strive so hard for. Swell photography, too, huh, boys?



Do you recall reading about Sal Taibi in our "News of the Modelers"? Well, here's Sal in person! The camera caught him here just after he copped first honors in the Class "A" gas event at the recent East Paterson, N. J., meet.



This 82"-span gasliner of the Lockheed "Vega" was fabricated by Al Young, of Flushing, N. Y., President of the Model Aircraft Club of Long Island. "She's built to exact scale," says Al, "and has turned in some very good flights." And we readily believe it, considering what a sweet looker she is.



Right: Ernesto Cyril, who lives in Jamaica, N. Y., sent us this shot of his 2' Breguet bomber. "The model," Ernesto says, "is nearly a year and a half old and is still in top-flight flying condition." Isn't that some sort of a record, fellows?



Last month we gave you plans of Gil Shurman's "Rambler" gas job. Remember? We didn't have enough space to print this photo then, but here it is now! Yes, here's the "Rambler" with the trophy it won at the Quaker City Contest!



John Thomas, of Minneapolis, Minn., built this "Hi-Climber" from the plans in the August, 1939, F.A. John tells us that the ship's everything Earl Stahl, the designer, promised she would be, and he's more than satisfied with her. But instead of making his prop with two blades in the conventional manner, our Minneapolis modeler made her with one blade and used a common safety pin as a counterbalance! We've never seen this safety pin method tried before, but it seems like a good idea. How about it, Earl?

Build our

Cub "Coupe"

The little two-place Cub planes are among the most popular knockabouts in the world and can be seen on any airport at any time. Right? Well, we know you boys have wanted to build a replica of Piper Aircraft's newest addition to the sportster family—the "Coupe." And we're right here to help you along! So sharpen that balsa knife of yours, drag down the old supply box, and get goin'!

THERE she comes! A gentle bank and the bright yellow cabin monoplane heads into the breeze. Settling steadily, she touches the grass on all three points and rolls to a stop. A Sunday afternoon scene at the local airport? Nope, it's just our snappy model of the latest of the famous line of Cubs—the Cub Coupe!

Demand for side-by-side seating arrangements on the lightplane market induced the Piper Aircraft Corp. to follow the lead of Taylorcraft and Aeronca and produce a little competition for their products in the form of the Coupe. The new ship is a bit more luxurious than the usual lightplane and is equipped with wheel pants, a streamlined fin, hydraulic brakes, a full swivel tail wheel, and a roomy, fully-upholstered cabin with doors on both sides.

The rakish appearance of the 50-h.p. coupe must be of some assistance to its performance, for although weighing 110 pounds more than its sister ship, the tandem 50-h.p. Cub Sport, it has a 2-m.p.h. advantage in speed and an equal rate of climb. Of course, the greater weight does increase the landing speed and take-off run, but not to a great extent. An even further refinement on the original design has produced a model featuring the new 65-h.p. Continental to give extra performance.

But we're more interested in the miniature than in the ship itself. As a model, the Coupe has much to

recommend itself to the beginner as well as the expert. What could be simpler to build than a rectangular fuselage, with a high wing and a simple cabin?

Even when the original model took off on its first flight it showed remarkable stability and required very little adjustment. It consistently gives flights of 45 to 75 seconds, with occasional flights that would do credit to an endurance job. Using a winder you'll be able to put between 800 and 900 turns on a lubricated motor without straining anything.

But we'll let the ship speak for itself. So dust off your workbench and let's begin. Now just because we've whetted your enthusiasm to



No, this isn't our miniature's big brother. It's really Claude's ship heading for a bit of altitude!

get the ship built, don't try to get her done before supper time. A little patience spent in seeing that the landing gear is on perfectly solid, and that all the joints are securely cemented will save you hours of repair and despair. And in this same line, we can't over-emphasize

the value of "pre-coating"—that is, coating all cemented joints with cement and allowing it to soak

into the wood pores before putting on the final coat just before placing that particular piece in the frame. If more modelers observed this simple suggestion, there would be fewer examples of "accordionating" fuselages. the familiar type when, after about 400 turns are put on the motor, the nose block kisses the tail skid in a not-too-friendly fashion.

By Claude D. McCullough

BUILDING THE BODY

SELLECT your wood carefully, fellows. That soft balsa handles easily but takes little punishment. And after studying the Bill of Materials and the plans, collect your implements—razor-blade, pins, pocket-knife, and iodine—and tack the plans down to a soft board. Measure the main $\frac{1}{8}$ " sq. longerons and pin them in their proper positions on the plan. Work down the fuselage, adding the vertical braces of $\frac{1}{16}$ " by $\frac{1}{8}$ " balsa. The other side of the body is built in exactly the same manner and is constructed directly on top of the first half.

After the fuselage sides have completely dried, remove them from the plan and cut them apart. Pin each side on the top view with the tops face down and at right angles



Maybe it's our eyes—and maybe we're just plain dumb. But if we hadn't given this shot the once over a couple of times with a magnifying glass, we'd still think this is a pic of a real "Coupe" standing in front of the Piper plant! Do you blame us?

BILL OF MATERIALS

(All wood medium balsa except where specified)

Twelve strips $\frac{1}{8}$ " by $\frac{1}{8}$ " by 18" for longerons, wing spars, and leading edge;
Eight strips $\frac{1}{16}$ " by $\frac{1}{8}$ " by 18" for stringers and vertical fuselage cross pieces;
Eight strips $\frac{1}{16}$ " by $\frac{1}{16}$ " by 18" for stringers and tail ribs;
Four sheets $\frac{1}{16}$ " by 2" by 18" for ribs, formers, and tail outline;
Two strips $\frac{1}{16}$ " by $\frac{1}{4}$ " by 18" for trailing edge;
Two strips $\frac{1}{16}$ " by $\frac{3}{16}$ " by 18" for wing struts;
One sheet of $\frac{1}{8}$ " by 2" by 8" hard balsa for landing gear

struts and scrap parts;
One block $\frac{1}{4}$ " by 2" by 12" for wheel pants;
One block $\frac{3}{4}$ " by $1\frac{1}{4}$ " by 7" balsa for prop;
One block 2" by $2\frac{1}{4}$ " by $1\frac{3}{4}$ " soft balsa for nose block;
One piece $\frac{1}{16}$ " by $\frac{1}{16}$ " by 18" bamboo for wing tips;
One pair 1" balloon type wheels, one small tail wheel, length of No. 14 piano wire, sheet of celluloid, small scrap of sheet brass, three sheets of Jap paper, 10' feet of $\frac{1}{30}$ " by $\frac{1}{8}$ " brown rubber, 6" length of $\frac{1}{16}$ " wire, small piece of soft iron wire, thread, pins, glue, dope, washers, razor blade, sandpaper, etc.

to the table. The cross members may then be cemented in, forming the rectangular portion of the fuselage. To prevent the fuselage from twisting while drying, a simple jig may be made from book ends or some other similar straight sided object placed against the sides of the body.

The formers are cut from $\frac{1}{16}$ " flat balsa, using the patterns shown on the plan, and cemented in their respective positions. The two longerons that run the length of the fuselage are pinned in place along the side and cemented at each point where they cross a vertical brace. Note that these longerons taper slightly at the front and rear.

The nose is very simple to make and is carved from a soft balsa block and hollowed as indicated on the plan. Fit it carefully to the front of the fuselage and add the dummy motor cylinders. The cylinder banks, incidentally, are offset slightly, as explained on the plan. The landing gear is of the conventional faired wire-braced type and no difficulty should be encountered with this item. Be sure, however, that the parts are joined to the fuselage securely, coating several times with cement. If your fuselage seems to be slightly weak at the landing gear juncture, add several internal cross-pieces to strengthen it.

THE WING STRUCTURE

CUT NINETEEN wing ribs from the pattern on the plan from $\frac{1}{16}$ " flat balsa sheet. Pin the $\frac{1}{8}$ " bottom spar to the plan and cement the ribs in place. When they have dried, add the top spar and the leading and trailing edges of the indicated sizes. Pin, if necessary, until dry.

Taper and sand the wing to correct airfoil and add the tips of $\frac{1}{16}$ " square bamboo. After the wing is entirely finished, crack the spars for dihedral, reinforce with small triangles of balsa, and cement securely. Each

tip is raised 1" by placing blocks underneath and weighing it down solidly.

The main struts are of streamlined balsa and the jury struts are rounded to $\frac{1}{8}$ ". Measure the strut lengths to the finished fuselage for absolute accuracy but do not install them until the plane has been completely finished and decorated.

The curved edges of the rudder and stabilizer are cut from $\frac{1}{16}$ " balsa. They are pinned on the plan and completed with the addition of the $\frac{1}{16}$ " sq. cross pieces. Use care in construction, for badly built tail surfaces will often ruin the flying qualities of an otherwise good model. The rudder and elevator have been slightly enlarged to give better stability in flight. They are covered before assembly and braced with thread. If you care, you might make them movable by using soft wire hinges, as indicated on the plan, for greater ease of adjustment.

COVERING THE COUPE

BEFORE covering, bend two wire hooks of 14 gauge music wire. Cover each with spaghetti tubing and install one in the rear of the fuselage and the other on the prop shaft. When you're absolutely certain that all interior details are finished, prepare for covering by selecting a color scheme. The original ship was all yellow with black trim, which is the usual Cub color scheme. In later models of the Coupe, the colors of red and cream seem to predominate.

The covering operation itself is difficult only if you make it so. In all cases cement only the *outline* of the part to be covered. It's not at all necessary to fasten the paper to the top and bottom of the ribs or to the vertical fuselage cross braces. Use cement or heavy dope and place the part down on a sheet of tissue, trim the edges, and pull out wrinkles by stroking the sides with your fingers before the adhesive dries.

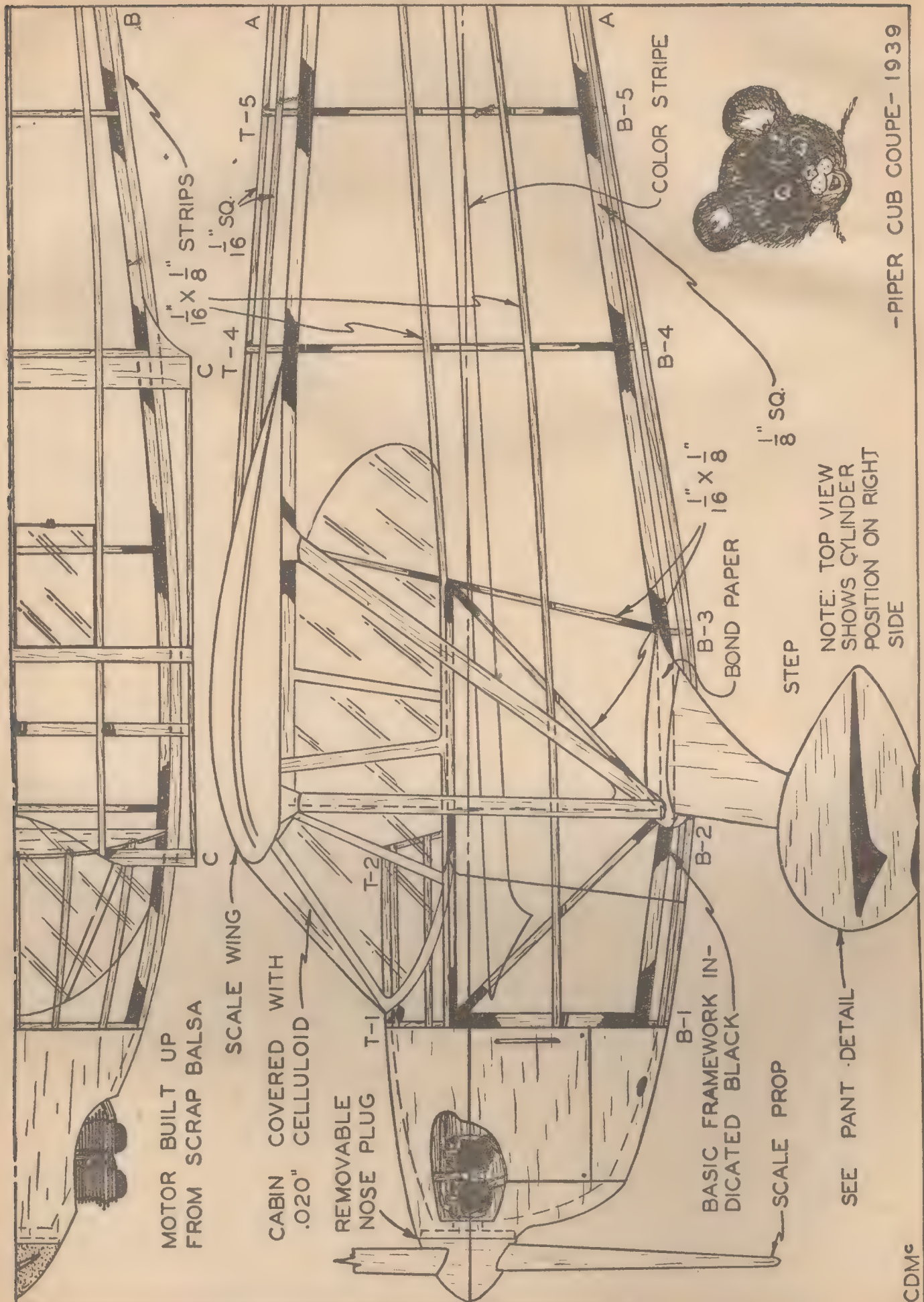
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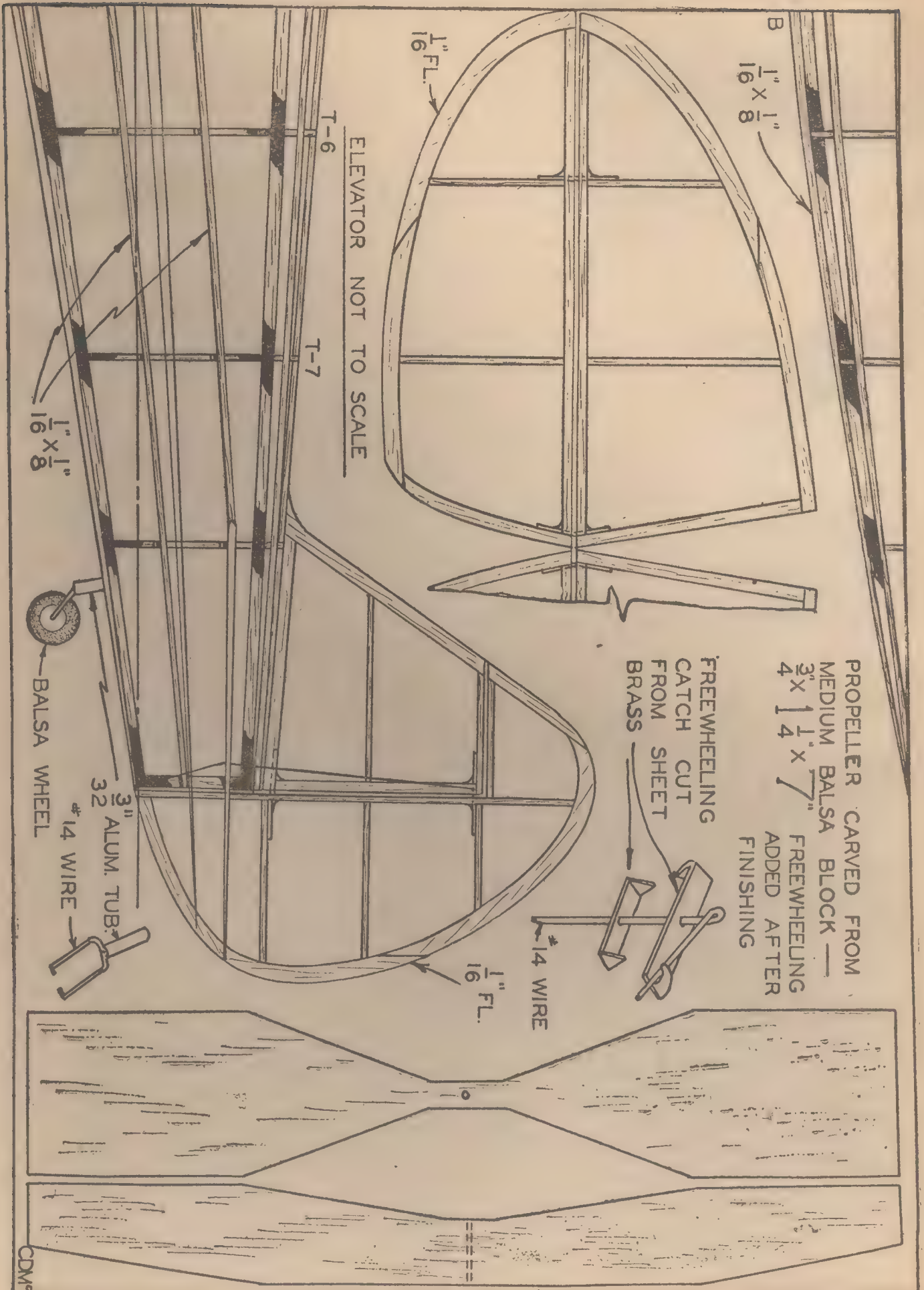


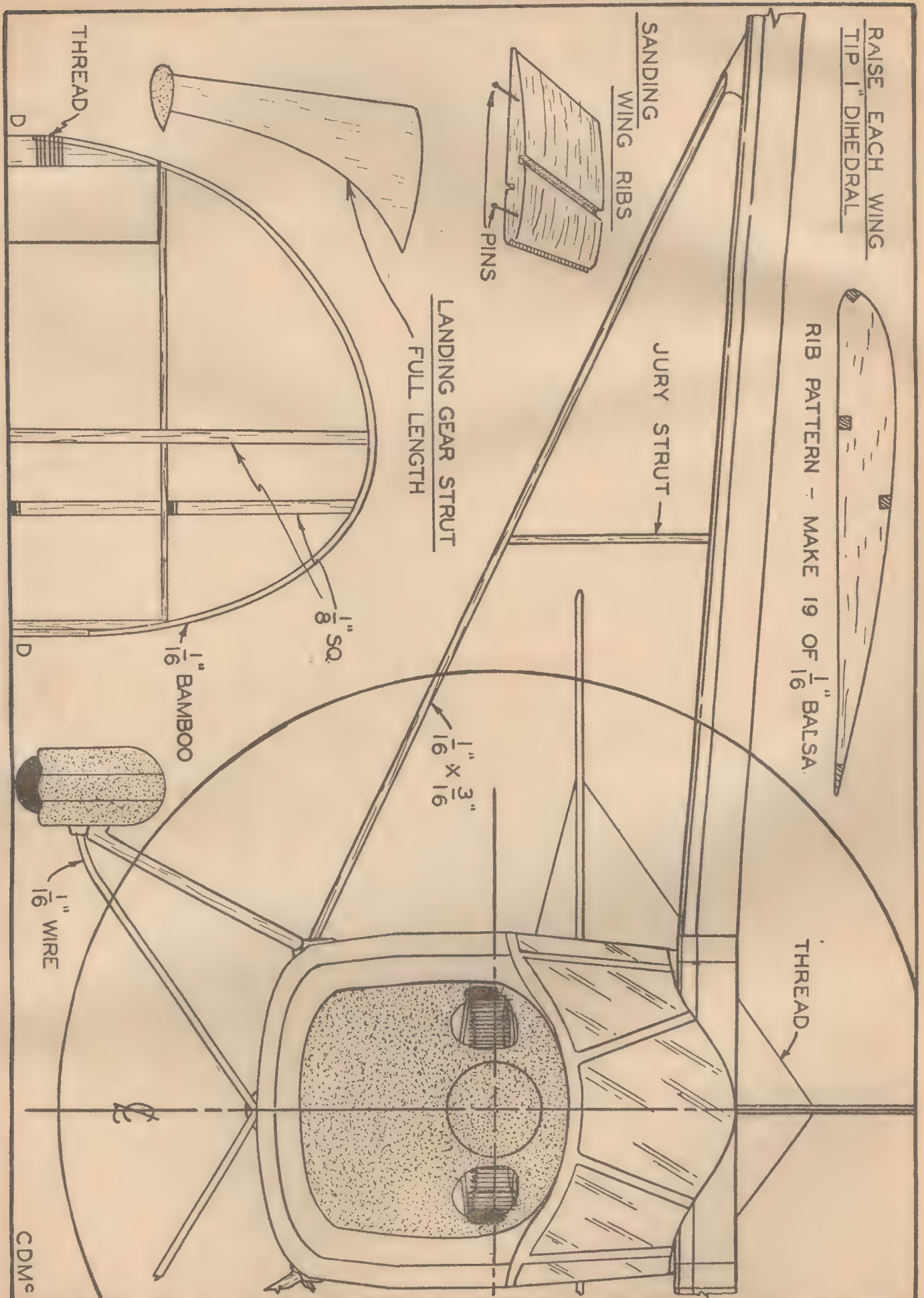
In this upish and frontish view of the "Coupe," many fine details are clearly brought out. Look closely and you'll see what a swell job Claude did of the prop, how carefully he installed the celluloid windshield, and what a particularly top-notch paint job he achieved. Also, the gentle dihedral angle of the wing can be noticed here, which gives the miniature a very rakish appearance—besides making her fly heaps better.

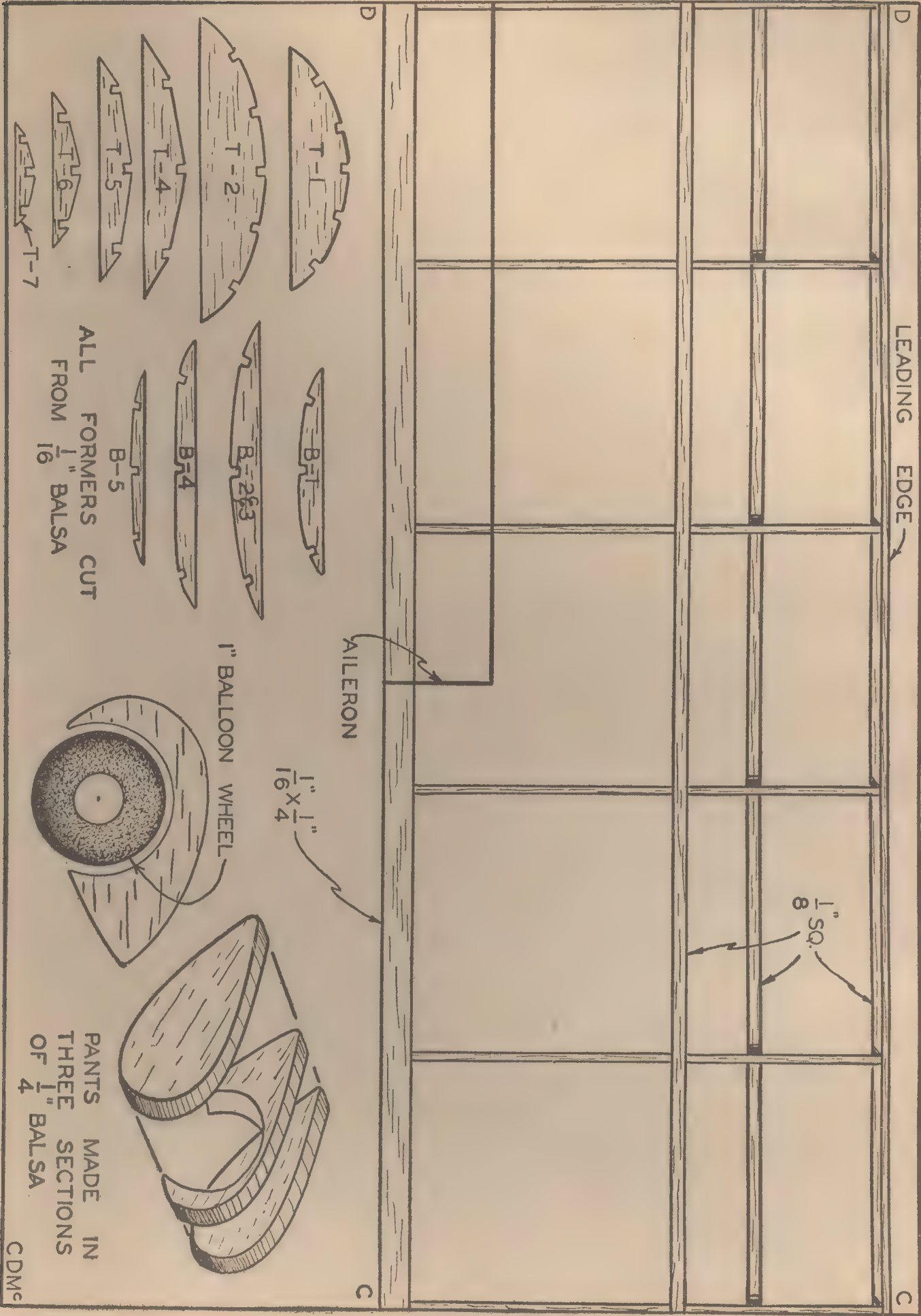


Here we have still another front shot of Claude's model, and we supply it so you fellows will be able to see just what your miniature should look like real close up on both sides. The details we spoke of in the shot immediately on the left are brought out in even nearer fashion here. Also, in this view, you can see that jury strut and how it is attached to the wing spar.









Again—The Nationals!

BEYOND A DOUBT, the 12th National Championship Model Airplane Meet, held in Detroit on the torrid days of July 5th to 9th, was the most hectic, hurdy-gurdy, pellmell National Contest ever held and—we hope—to be held!

But before we go any further, let's roam down the list and see what fellows placed high, how fast the timers worked, and what a game sport Jim Cahill is. Jim, you know, is the boy who brought home first place in the Wakefield's from Paris last August with a time of 10 min., 54 sec.

Who was the champeen? Why, lads, he was none other than that veteran builder from Akron—Henry Thomas! Yep, Henry sped past all the other fellows and flashed across the line a winnah! In other words, he was proclaimed "the National Model Airplane Champion and was awarded the magnificent Exchange Club Trophy for his outstanding flights.

The other top-notch modelers in the Outdoor events were: Bob Toft, who turned in an average time in the Jr.-Sr. Cabin class that was four full minutes better than the next contestant. V. Davis, who had a tight squeeze in the Cabin struggle, Open, and pushed out Ken

By Phil Zecchitella

Carter for top honors only by a narrow margin of 4 seconds!

In the Indoor competitions, Ed Naudzius also had a narrow victory. But his ship proved its worth and copped the cup in the Jr.-Sr. Stick event. Then Ed Fulmer took the spotlight when his stick typer spanged through to win the Opens and the handsome FLYING ACES Trophy by a close shave of two seconds.

In the Cabin stint, Senior, John Stokes had nothing to worry about, though. You see, he led the field by a good two minutes. Joe Matulis flitted to first in the Cabin Open-tourney, but only after keeping his fingers crossed and praying to Lady Luck.

A slight drizzle purged the field for a short while, but everything was in ship-shape order before the gas jobbers took to the field. John Findra showed his hand in the Jr.-Sr. Class "A" tussle and wadded through the field easily. Then Frank Young opened up and gave his petrol pretty the gun to get the gravy in the Class

Gangway, fans! Here's Eagle-Eyed Phil Z., back from the Michigan capital with his dramatic, straight-from-the-shoulder account of that biggest of all model meets—the Nationals! So bend your ears as our perky, Detroit-trudging commentator conducts you right onto the Wayne County tarmac for this top-flight balsa show of the year. Results, awards, color—yes! And what's more, "The Zecch" takes you smack behind the scenes into the bargain and calls a tail-skid a tail-skid in his own popular, piercing, "give 'em the lowdown" style.

Let 'er go—

"A" Open session. Wax Wasseem won the Jr.-Sr. Class "B" event by more than 2½ minutes. Incidentally, he turned in the best power model time of the day, averaging almost nine minutes on his three flights. And then Bob Besse bested the other boys in the Open scramble



Above: No pictorial account of the Nationals is complete without a photo of the youngest and oldest contestants. Well, boys, here they are! The oldest is William P. Dean, age 67; and the youngest is Joe Bashore, 10. Dean flew one of the old reliable twin pushers at the Meet. And Joe, as you can see, has a gas job that's a heck of a lot bigger than he is! Left: This, modelers, is Ed Fulmer, of McKees Rocks, Pa., holding the swell FLYING ACES Trophy he won by copping top posish in the Open Class Stick Event. Ed, you may recall, placed third in that contest last year. Well, we're mighty glad that Ed kept plugging away until he hit the top-notch pinnacle. Congrats, Ed! (Kulick Photos.)

Right: The Good twins, Walt and Bill—and, as Phil says, we DO mean good—are here seen getting their radio controlled job in condition. These boys, repeating their victory of last year, roared home to first place with a total of 89 points. (Kulick photo.)



with an average of well over three minutes.

In the Jr.-Sr. Class "C" stint, Roy Rousch soared so far ahead of the field that the judges had no trouble at all in declaring him the winner. And Dick Everett took over the honors in the Open competitions. In the Jr.-Sr. Unlimited tourney, Bob Wright took first by only a narrow margin. Then in the Open session, Bud McClellan roared home—and we do mean roared!—with an average time that was 7 min., 18 sec., better than Ed Schunke's, the next fellow in the line-up!

The Good brothers, Walter and William, repeated their last year's victory in the Radio Controlled event and brought their sleek flyer in to honors by a wide margin of 78 points! (Farther ahead in this account, we give you a full description of their flight.) It was really thrilling to see their graceful model flit through the air, and the way Walter made the craft perform at will was uncanny.

After a hot battle in the Wakefield Eliminations, in which Earl Stahl, popular FLYING ACES model designer, missed out by the skin of his teeth, the following lads were selected to represent Uncle Samuel in the International Contest: Bob Chaille, Jim Thames, Jim Bohash, Dick Korda, Jim Cahill, and Ralph Baker. Jim Cahill and Jim Bohash, you know, were also on the Wakefield Team last year. Ralph Baker is not listed in our competition results as he was chosen to be on the Team in the West Coast Eliminations.

Let's hope that when the boys get set out at Bendix Field, N. J., to let their ships roar on the 6th of August, one of them will keep the cup for another year in the ol' U.S.A. Anyway, let the best man—whoever he may be—win!

Jim Cahill would have been given

a place on the Team automatically because of his victory in Paris last year. But he proved that he was a real sport, for, you see, he wouldn't consent to this arrangement. He entered the competitions the same as the other lads, without a point to his credit, and proved that he is really worthy of a place on the Team. More power to you, Jim!

The timers had their hands full at the Meet and worked at breakneck speed. In fact—even though no official word has been flashed through at this time—it is quite possible that they set a new record of some sort. Believe it or not, they clocked no less than 1,209 flights in a short space of seven hours! That's what we'd call a heap of work.

Now let's get back to the Meet itself and see what went on that was interesting and otherwise. Here we go—

VAGUE though our memory may be in relation to past Nationals, it occurs to us that upon similar occasions we invariably inject the same introduction as to what might be expected in a narrative of the Meet. But just this once you will have to take us seriously and really understand that this Contest is the real grand-daddy of adjective slinging.



Left: And now we see Bud McClellan, of Detroit, about to launch his "Zipper"-type plane in the Open Power Model Event. Bud hooked the cup with his job, too! His longest flight was 39 min. Above: This shot will introduce none other than the Meet Champ! Yep, it's Henry Thomas, of Akron. And look how our National Model Airplane Champion is holding onto that magnificent Exchange Club Trophy for dear life. But do you blame him? Right: Max Wasseem, 16, of New Philadelphia, Ohio, is shown here "givin' th' take-off" to the one-wheeler that brought him first place in the Class "B" Jr.-Sr. Power Event. Max took home a \$25 cash award for his 8:55 average. Or maybe the \$25 took him home.



WINNERS IN TWELFTH NATIONALS

Times Given in Minutes and Seconds

Outdoor Cabin Event—Jr.-Sr.

Name	City	Time
1. Bob Toft	Minneapolis	12:45
2. George Reich	Cleveland	8:35
3. Ed Naudzius	Detroit	7:24
4. Walt Dickinson	Newark	7:20
5. Bob Lichten	Philadelphia	7:19

Outdoor Cabin Event—Open

1. V. Davis	Houston	8:47
2. Ken Carter	Nashville	8:23
3. Ken Carpenter	Akron	4:54
4. Henry Thomas	Akron	3:24
5. Henry Struck	New York	3:5

Outdoor Flying Scale Event—Jr.-Sr.

	Points
1. Roger Hammer	60.38
2. Tony Kaslouskas	60.28
3. Rance Hill	54.50
4. Ted Just	52.78
5. Martin Phillips	33.99

Outdoor Flying Scale Event—Open

1. Henry Thomas	Akron	69.25
2. Henry Struck	New York	68.60
3. John Ogilvie	New York	67.69
4. Herbert Wise	Akron	52.37
5. Jim Noonan	Milwaukee	32.40

Indoor Stick Event—Jr.-Sr.

		Time
1. Ed Naudzius	Detroit	17:51
2. Alvie Dague	Tulsa	17:29
3. John Stokes	Huntington	
	Valley, Pa.	17:7
4. Hilton Huguelet	Chicago	16:09
5. Bob Jacobsen	Philadelphia	15:08

Indoor Stick Event—Open

1. Ed Fulmer	McKees Rocks, Pa.	14:34
2. Merrick Andrews	Philadelphia	14:32
3. Andrew Petersen	Los Angeles	13:31
4. Jim Cahill	Indianapolis	13:31
5. Joe Matulis	Chicago	12:52

Indoor Cabin Event—Senior

1. John Stokes	Huntington Valley	14:12
2. Stan Stanwick	Boston	12:17
3. Larry Lerman	Boston	11:25
4. Matthew Smith	Washington	11:17
5. Ted Just	Johnstown	9:58

Indoor Cabin Event—Open

1. Joe Matulis	Chicago	10:55
2. Andrew Petersen	Los Angeles	10:24
3. Jim Cahill	Indianapolis	8:37
4. Merrick Andrews	Philadelphia	5:26
5. Roy Wriston	Tulsa	4:13

Power Model Event—Jr.-Sr.

Name	City	Time
1. John Findra	New Brunswick, Ind.	1:6
2. Leon Shulman	Brooklyn	:28
3. Arthur Block	New York	:23
4. Howard Melin	Galesburg, Ill.	:20

Power Model Event—Open

1. Frank Young	Lansing	7:1
2. Chas. Guarnieri	New York	1:4

Power Model Event—Jr.-Sr.

Name	City	Time
1. Max Wassem	N. Philadelphia, O.	8:55
2. Herb Friedlander	Brooklyn	6:17
3. Bob Hoffmeyer	Akron	1:43
4. Leon Shulman	Brooklyn	1:42
5. Jim Gaff	Jackson, Mich.	1:35

Power Model Event—Open

1. Bob Besse	Cleveland	3:39
2. Henry Thomas	Akron	1:53
3. Dick Korda	Cleveland	1:41
4. Andrew Petersen	Los Angeles	1:39
5. George Meyer	Overland, Mo.	1:30

Power Model Event—Jr.-Sr.

Name	City	Time
1. Roy Rousch	Ferndale, Mich.	7:45
2. E. Barron	Grayslake, Ill.	4:1
3. F. Lorenz	St. Louis	3:41
4. M. Spector	Cincinnati	3:28
5. F. Bergert	St. Louis	2:53

Power Model Event—Open

1. Dick Everett	Elm Grove, O.	4:55
2. Bill Allsopp	Detroit	3:51
3. Frank Draper	Charleston, Mich.	3:20
4. George Meyer	Overland, Mich.	3:11
5. Alfred Towle	Syracuse	3:1

Power Model Event—Jr.-Sr.

Name	City	Time
1. Bob Wright	Topeka	3:54
2. Vernon Krehbiel	Williamsville, Mich.	3:42
3. Henry Velkoff	Fort Wayne, Mich.	3:41
4. Harry Lorenz	Detroit	3:38
5. A. Wheeler	Syracuse	2:39

Power Model Event—Open

1. Bud McClellan	Detroit	12:47
2. Ed Schunke	Milwaukee	5:29
3. Norman Cross	Detroit	3:47
4. Chas. Hinkle	Janesville, Wis.	3:41
5. John Ogilvie	New York	3:7

Wakefield Eliminations—Jr.-Sr.

Name	City	Time
1. Bob Chaille	Miami	8:9
2. Jack Thames	Pittsburgh	6:34
3. Jim Bohash	Detroit	4:35
4. Arthur Beckington	Rockford, Mich.	3:33
5. Earl Stahl	Johnstown	3:10

Wakefield Eliminations—Open

1. Dick Korda	Cleveland	4:23
2. Jim Cahill	Indianapolis	3:1
3. Fred Mees	Columbus	2:36
4. Jim Noonan	Milwaukee	2:21
5. Walter March	Chicago	1:56

Radio Controlled Power Event

Radio Controlled Power Event		Points
1. Walter Good	Kalamazoo	89
2. Joe Raspante	New York	11
3. Elmer Wassman	Jacksonville	9
4. Phil Sonheim	(not given)	8
5. C. Siegfried	Wichita	8

Berryloid Finish Contest

1. C. Siegfried	Wichita
2. Michael Roll	Detroit
3. Joe Raspante	New York

American Moffett Team

1. Bob Toft	Minneapolis
2. V. Davis	Houston
3. George Reich	Cleveland
4. Ken Carter	Nashville
5. Ed Naudzius	Detroit
6. Walter Dickinson	Newark
7. Bob Lichten	Philadelphia

Canadian Moffett Team

1. Bob Milligan	Toronto
2. Harry Lucas	Toronto
3. Lavelle Walters	Windsor, Ont.
4. Roy Nelder	Toronto
5. Howard Adams	Toronto
6. Jeff Harris	Toronto

Moffett Competition Winners

1. Ed Naudzius	Detroit
2. George Reich	Cleveland
3. Bob Toft	Minneapolis
4. Walter Dickinson	Newark
5. Lavelle Walters	Windsor
6. Bob Milligan	Toronto

American Wakefield Team

1. Bob Chaille	Miami
2. Jim Thames	Pittsburgh
3. Jim Bohash	Detroit
4. Dick Korda	Cleveland
5. Jim Cahill	Indianapolis
6. Ralph Baker	Santa Ana, Calif.

Consider, for instance, that the entire National Meet had to be thoroughly rebuilt just fifteen days before the zero hour!

The sponsor of the Victory Banquet suddenly rescinded his offer to undertake "angleship" of this affair. Well, little things like that have happened before, so it did not cause too great a concern.

Quite nonchalantly—or so we would like to believe—Mr. Polk contacted the sponsors of the box lunches. In his own inimitable manner he asked them if they would consider sponsoring the Victory Banquet as well, and thereby receive all credit as far as nourishment was concerned. They told him they would consider the matter.

They had a meeting, they said, and decided that it was no soap on the banquet. In fact, they added that they could not even contribute all of the box lunches and had decided to cut the amount in half.

In desperation the feed bag committee went to another good Samaritan who had a good credit rating. Still no soap. The score now stood: lunches—half fed, half to go; banquet—what banquet?

To add insult to injury, which is our interpretation of having to "walk on an empty stomach," the transportation sponsors decided they could not live up to their offer!

But the worst was yet to come! The week-end before

the Big Brawl, the Contest Director undertook a routine trip to Selfridge Field to supply the official timers with full instructions and rules governing the Contest. He was informed that the Colonel was in New York (we don't suppose the World's Fair had anything to do with it). The next man in rank, however, supplied the eyepener. He stated that the officials, whom they had agreed to supply, had been transferred to other fields. This, he added, would make it impossible for the Army to fulfill its commitment to the Meet.

A hurried phone call was put through to Washington. Bill Enyart called on the Chief of the Air Corps, who said he was too busy to help. A committee of four called upon the Colonel who stated, with further emphasis, that it was "no dice."

Then they tackled the National Guard, R.O.T.C., C.C.C., and any other organized uniform group with a legitimate set of initials that they could think of. No luck.

At this point Howell (Squire) Eurich called Col. Floyd B. Evans, State Aviation Director, and poured into sympathetic ears a story of woe. (And we do mean WHOA!)

The very efficient Mr. Evans phoned back the next morning and told them to call W. F. Kinsey, of the N.Y.A., and ask for as many individuals as were re-

quired. Optimistic Mr. Eurich asked for seventy-five and pessimistic N.Y.A. said, "How about twenty?" Eurich: "No." N.Y.A.: "50?" Eurich: "Well, what the heck!"

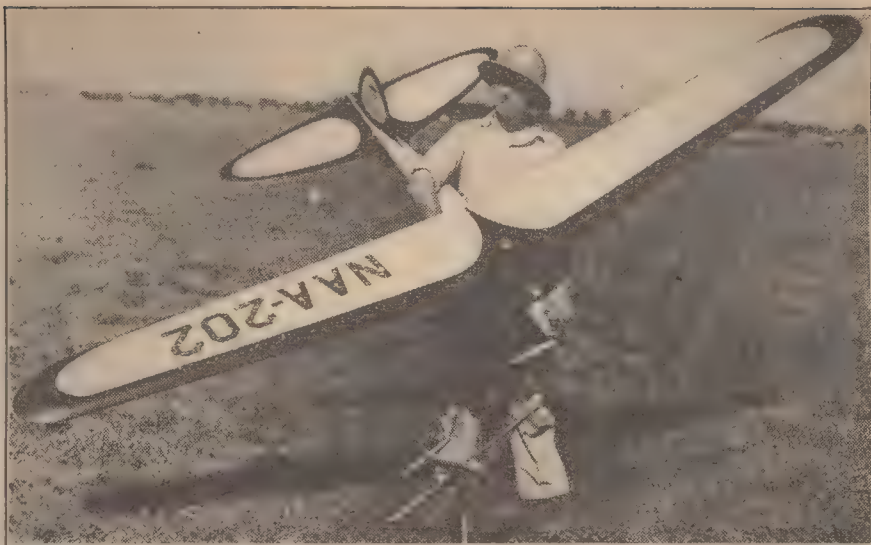
ON the morning of the Meet, the Navy officials were conspicuous by their absence. The C.O. explained that he had been caught short and that the men had been sent elsewhere. Al Lewis promptly flew to Wayne County Airport and requested forty volunteers to time the indoor events. These were flown back to Grosse Ill.

The next day financial troubles set in. In effect, they needed men and money, which began to feel like a petition for a W.P.A. project. But with due credit to the officials involved, everything turned out for the best. The Exchange Club solicited financial pledges and arranged for the banquet with the Fort Shelby Hotel—and that ends that!

However, even though the Committee went through the usual torment on those last few days before the Meet, everything turned out in top-notch condition. And then, for those five furious days of the Contest, a mighty swell time was had by all concerned. In fact, even though the usual crack-ups plagued the contestants, they left Detroit unanimously claiming that their modeling year of 1940 will be wasted if they are unable to make the trip to wherever next year's Nationals are to be held!

The entries numbered about 850 in comparison to the 450 of last year. Not until we arrived at Wayne County Airport did we realize that the 850 entrants meant, in terms of mathematics, 1700 lungs, 1700 arms, 1700 legs, more than 850 gas engines, and a proportionate amount of spectators, bordering upon a ratio of three to one.

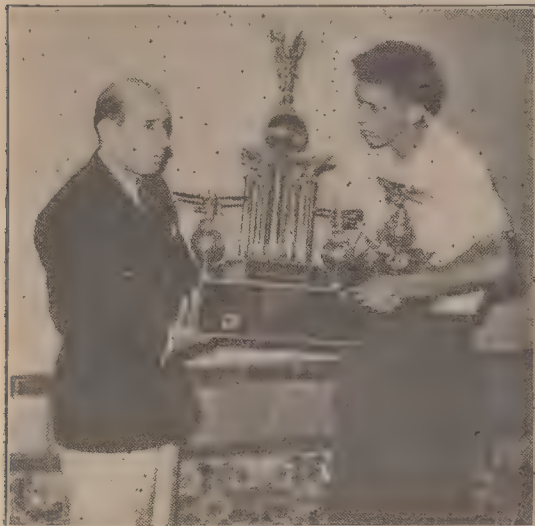
To continue our mathematical discourse, you must also realize that the rules for this Contest specified, for the first time, that the final time was to be the average of three flights. This meant that more than 2,500 flights with as many as three figures and a fraction had to be added three times and divided by three. For this mathematical project a calculating machine was used. But in the haste, the machine was transported to the airport



Charlie Siegfried, who won fifth place in the Radio Control show and first in the Berryloid Finish Contest, is presented here holding his beautifully-sleek gas job. And a mammoth ship she is! In contrast, the wing of that trophy standing just in front of Charlie would only be about large enough to make a reserve prop. (Kulick Photo.)



The smiling lad on the left, above, is Bob Toft, who nailed first in the Outdoor Cabin Event and first place on the Moffett Team. And so Bob carted the Stout Perpetual Trophy and the Peerless Model Airplane Trophy back to Minneapolis with him. (Kulick Photo.)



Gilbert Radoye presents the Gar Wood Trophy, also a smaller replica of the same, to Roy Rousch, of Ferdale, Mich. Roy won this award for taking first in the Jr.-Sr. Power Model Event, Class "C." How'd you like to have that mess of silverware on your bureau for a whole year?



Even at the Nationals accidents are bound to happen. And with that fact in mind, the Exchange Club set up a first aid station to care for the wounded. This young chap—Gordon Murray, of Brooklyn—doesn't seem to be in very bad condition, but he's getting that finger bandaged anyway. Probably got it smacked while swinging a prop.



Above we see three hard working officials in action—mental action. Calculating machines like this one were used to add and divide the times that the contestants turned in. The fellow on the left who seems to be having a bit of trouble with the sunlight is Art Vhay, Contest Director.

only to discover that it was wired for 120 volts and the nearest circuit plug was miles away. A battery of batteries was hurriedly requisitioned and were arranged in a series to supply the necessary brain current.

IN DIRECT contrast to the respect attributed to the mathematical situation we will, at this point, officially register our complete surprise at what were supposed to be orthodox model airplanes. In the past it was a standardized assumption that anything entering and flying in a model meet was endowed with at least a resemblance to an airplane. But here, we'll give you a "blow by blow" description of the queer and dubious assortment of the Class "C" sky-rockets—

Quite fashionable, it seems, is the practice of attempting to separate the wing from the fuselage in a manner that would cause doubt as to the relationship between the wing and the airplane. As though a doubt such as this had been foreseen, the relationship was acknowledged by the presence of an exaggerated and exceedingly lanky cabane. In our study of elementary aerodynamics we were led to believe that a cabane was supposed to be the difference between the wing and a fuselage, but certainly not the whole "shootin' match." However, it was obvious that these models were nothing but powered projectiles with a wing acting simply as a directional control.

The cross section areas were figured to include the cabane. And when you consider that the cabane in itself provided the greater portion of the required cross section, you may rest assured that these entries did not allot any further dimension to what was supposed to have been the fuselage than was necessary. The bodies themselves were simply suggestions as to what could have developed into full-fledged fuselages had they been

given an opportunity to develop.

Originally, model airplanes were built for the purpose of calculating a proper design for man-carrying craft. And we do not hesitate to state that *we defy any of these current so-called models to successfully further its principles in man-carrying aircraft!*

At the present time, I am dictating this story in Chicago. Since leaving Detroit I have had the occasion to interview several of the older and more stable model builders who were at this meet. I recall one in particular—Dr. Evans, of Gary, Indiana—whom I will quote:

"We like to build ships that look like airplanes. But you must remember that we are interested in winning contests and we realize that our obvious idealistic attitude is a defeat to our purpose. Those models were built to the very minimum of 8-ounces. Our ships are built up to 14-ounces and after continual flying we still have enough left to take pictures of, which, when developed, can leave no doubt but what it was an airplane."

ALL THIS, however, was compensated by a demonstration of what was the most scientific eye-opener we have ever been privileged to witness. This was the radio controlled event, in which more than a dozen entries were prepared to melt their radio tubes for the Edward Roberts' trophy. Walter and William Good, 23 year old twins from Kalamazoo, Mich., led the field in the model aviation's newest sphere of activity. The Good twins—and we do mean good—have finally achieved a thoroughly radio controlled gas model.

Their eight-pound monoplane took off under its own power, climbed to 1,500 feet, maneuvered freely and precisely for fourteen minutes, and landed within 100 feet of its take-off point. All of this flying was actuated

by radio impulses transmitted to the plane from a 10-watt portable radio on the ground!

Perhaps the most striking effect was the casual manner in which all phases of the complex undertaking were co-ordinated. Walter Good was standing alongside the transmitter and antenna, holding a simple little box with a switch at the top. Casually chatting with the radio event official, Eddie Roberts, he would flick the switch, causing the model to head in a requested direction.

Mr. Roberts asked Good if he would undertake a "gold star" flight, which is a cross-country hop, to a prescribed destination, and back.

At the time of this inquiry, the model was hovering over the Southeastern section of the field. Walter was then given a destination, which was a yellow house at the north west section of Wayne County Airport.

A flick of the switch caused the craft to slowly point its nose toward the house. A few minutes later it arrived over its destination and Walter made the model circle.

He asked Mr. Roberts if he should bring the plane back. Eddie said "Yes." And in a few moments it was again flying overhead. He was next requested to make the craft perform a figure eight.

It started into a bank and after completing its circle turned the other way and banked in the opposite direction. Good then decided that the performance was sufficient in view of the fact that none of the other contestants had as yet taken their flights.

The model in this flight employed rudder control. It also was equipped with an elevator control. This, stated Walter, was his "ace in the hole"; meaning that if another model should come within competing distance, he would fly his ship again and loop it, as well as controlling its altitude. With this flight he garnered eighty-nine points. The closest competitor was Joe Raspante, of Brooklyn, with a flight rating of eleven points. Other entrants in this event were: Elmer Wassman, persistent flyer of Jacksonville, Fla., with nine points; Phil Sonheim, eight points; and Charlie Siegfried, of Wichita, eight points. You can check with the table of results for other winners.

And while you're looking at that table, you'll notice that Bob Toft was top man in the American Moffett Team, but only third place winner in the competitions. "How come?" you'll probably ask, so let's stop here for a moment for explanations:

The Moffet Team was chosen from the fellows who turned in the best average times in the Jr.-Sr. and Open Outdoor Cabin Events. In other

(Continued on page 62)



Ronald Kirk and Donald Green, both of St. Paul, Minn., were the first modelers to arrive at the Meet. Here they're busy cooking an early morning breakfast right in front of their pup tent. Scores of other chaps also set up their canvas right alongside the Wayne County Airport.

Modelers' News

CASANO COPS JERSEY RUBBER TITLE
THE LINDEN Model Aircraft Club of New Jersey held its First Annual State Rubber Meet on May 20 at Linden. A good bunch of contestants—92 in all—hailed from New York, Pennsylvania, Washington, D.C., and, of course, New Jersey.

In running such a successful all-rubber contest, the sponsors proved that rubber ships have not died out in popularity. The only spark needed, according to the committee, would be more frequent tourneys to bring the boys around. The Linden Club has decided to make this State Meet a yearly affair.

The contest ran true to form with the usual rubber-breaking, spiral dives, and broken hearts. And the wind blew so hard in the afternoon that many models flew out of sight in less than 2½ min.! In the morning, however, ideal conditions brought several long flights.

Al Casano, of Passaic's Stratosphere Club, emerged as the New Jersey State Champion, but only after stiff competition. He received a handsomely inscribed trophy and a gas model kit as prizes. Casano piled up the most points by placing first in the fuselage event and seventh in the stick event.

The meet was directed by Frank M. Krysiak, with the assistance of the playground directors of the Linden Recreation Commission. And the tourney was sponsored by the Linden Model Aircraft Club in co-operation with the Chamber of Commerce and local merchants.

The complete results follow:

Stick—First: Gil Shurman, Bronx, N. Y., 5 min., 40 sec.; second: G. De Block, Lodi, N. J., 5 min., 29 sec.; third: S. Colletti, Linden, 4 min., 51 sec.; fourth: R. Gable, 4 min., 40 sec.; fifth: M. Anderson, 4 min., 20 sec.; sixth: J. Irving, 4 min., 1 sec.; and seventh: A. Casano, Passaic, N. J., 3 min., 56 sec.

Fuselage—First: A. Casano, Passaic, 8 min., 7 sec.; second: A. Koslow, 6 min., 55 sec.; third: M. Anderson, 5 min., 56 sec.; fourth: T. Essinger, 4 min., 58 sec.; fifth: G. De Block, Lodi, 4 min., 39 sec.; sixth: S. Colletti, Linden, 4 min., 18 sec.; and seventh: J. Findra, 4 min., 17 sec.

Glider—First: A. Mansfield, Brooklyn, N. Y., 3 min., 29 sec.; second: E. Linfante, Jersey City, N. J., 3 min., 28 sec.; third: R. Hilts, Linden, 2 min., 53 sec.; fourth: W. Dickinson, Newark, N. J., 2 min., 39 sec.; fifth: H. Salvesson, 2 min., 21 sec.; sixth: S. Colletti, Linden, 1 min., 34 sec.; and seventh: R. Smith, Cranford, N. J., 1 min., 28 sec.

Junior Fuselage—First: E. Helvey, Garfield, N. J., 5 min., 32 sec.; second: E. Jala, Dunellen, N. J., 3 min., 21 sec.; third: R. Lada, Linden, 3 min., 10 sec.; fourth: T. Gonsoph, Philadelphia, 2 min., 21 sec.; fifth: E.

Stanley, Linden, 2 min. flat; sixth: R. Hordis, Philadelphia, 1 min., 26 sec.; and seventh: R. Kempf, Elizabeth, N. J., 1 min., 3 sec.

MODELS BY "JIG" METHOD

A NEW type model kit was recently put on the market in which the fuselage, wing structure, tail surfaces, and wire parts are prefabricated in the rubber jobs. And in the gas plane kits, the fuselage sides are prefabricated also. In each kit a jig is included with which the fuselage is built.

MCCULLOUGH WINS IN IOWA

DESPITE a raging wind, the Third Annual Championships of the Rocketeer Aero Club of Ottumwa, Iowa, got off to a good start on June 18 with an entry list of 50 modelers from the surrounding district. A preliminary contest to the official State Championship Meet to be held in Ottumwa on July 30, the tourney was held at the Ottumwa Airport.

Claude D. McCullough—who furnished the Cub Coupe plans in this issue—won the gas event with his Brown-powered "Clipper". He set a high time for the meet, turning in 4 min., 35 sec. George Schleicher, of Ottumwa, placed second with his Cyclone-powered "Zipper."

John Davis, Vice-President of the

Rocketeer Aero Club, won the senior endurance event with a flight of 2 min., 2 sec. Ken Heckart bested the other contestants in the Junior Divisions, despite several smashups of his model.

Harry Thornberry and Bob Simmons, both of Fairfield, won the scale event with a Planefilm-covered gas-powered "Jeep." Ultra-complete, it even featured actually working instruments on the panel. Don Fuqua, President of the Fairfield Hi-Y Aeromats, copped second with a super-detailed "Ryan."

G.H.Q. EXPANDS

WITH production reported to be nearing fifteen thousand miniature gas engines a year, G.H.Q. Motors, Inc., have secured larger quarters for their factory and offices at 40 East 21st Street, New York City. Not only will there be increased facilities for production, we understand, but a complete showroom will be maintained for display of gas engines, power models, boat materials, and midget cars.

PITTSBURGHERS BATTLE LOW CEILING

JUPITER PLUVIUS came close to raining out the enthusiasm of the model builders at the Second Allegheny Mountain Area Model Meet, held June 18 at Butler Airport, Pittsburgh. But the contestants persevered, and a total of 100 registered for the tourney. The contest got under way as scheduled, regardless of

(Continued on page 50)

CONTEST CALENDAR

All clubs and organizations sponsoring model airplane meets are urged to send us advance notification of contests for inclusion in this calendar. Such notices should be in our hands at least six weeks in advance of the tourney. Results of meets, and pictures when possible, are likewise desired for inclusion in our model news columns. Address Editor, Model Department, FLYING ACES, 67 West 44 Street, New York City.

Greenville, S. C.—Aug. 24-25; Tri-State Gas Tourney to be open to modelers of North and South Carolina and Georgia. Contest will be held at the Greenville Municipal Airport and will be sponsored by the "Torque Flyers" Model Airplane Club. Contact Jim Metchicas, 107 W. Washington St., Greenville, for full dope on the meet.

Lebanon, Pa.—Aug. 26; Seventh Annual Outdoor Flying Meet to be sponsored by Lebanon Exchange Club. Complete schedule of outdoor events, both gas and rubber. Dope from Contest Director, Lebanon Exchange Club.

Santa Monica, Calif.—Aug. 26-27; The Santa Monica Evening Outlook Western Model Airplane Contest to be open for Class "C" rubber jobs and gas ships. Prize list is now \$600 but \$800 is expected by the Contest deadline. Entry fee \$1.00. Contact Robert C. Smith, c/o "Evening Outlook," 1245 Fourth St., Santa Monica, for details.

New Orleans, La.—Aug. 26-27; Gulf States Model Meet. To be held at Milneburg, near New Pontchartrain Beach. Open to contestants from Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Oklahoma, Tennessee, and Texas. Details from Whalen J. Norman, Contest Director, 4506 Freret St.

Akron, Ohio—Aug. 30, 31, & Sept. 1; 1939 Scripps-Howard Junior National Air Races to be held at Municipal Airport. Tourney will be open to all model builders regardless of club affiliations. There will be no restrictions of any kind and no entry fees. Contact The Akron Beacon Journal, Akron, for complete info on the meet.

Genesee, N. Y.—Sept. 2; NAR New York Gas Model Championship Meet to be sponsored by the Gannett Newspapers. The champion will be awarded the Comdr. Holderman Trophy and will be flown to the National Air Races in Cleveland on Sept. 3. Tourney open only to modelers living in New York state. Contact Lt. John L. Scherer, Contest Director, c/o "The Gannett Newspapers," Times-Union Building, Rochester, N. Y., for dope.

Philadelphia, Pa.—Sept. 9; Quaker City Gas Model Meet. No details have been released, but all dope can be had from William P. Beck, Secretary, 209 Righter St., Philadelphia.

Albany, N. Y.—Sept. 10; Stick, Cabin, and Gas tourney to be sponsored by Capitol District Aeronautic Association. Prizes to tenth place. Full dope from C. S. Collins, 410 Pleasantview Ave., Albany.

Pittsburgh, Pa.—Sept. 16; Tri-State Championships (Indoor) to be sponsored by the Boys' Club of Pittsburgh will be held at Butler Airport. Details from Harry G. Vogler, Contest Director, 4412 Butler St., Pittsburgh. Enclose self-addressed, stamped envelope for reply.

St. Paul, Mo.—Sept. 17—St. Paul Junior Association of Commerce to sponsor a meet for both gas and rubber-powered models. Contest to be held at St. Paul Airport. Full info from John J. Sweeney, Chairman Airport Program Committee, 215 Pioneer Building.

Stroudsburg, Pa.—Oct. 16-21; Monroe County Rubber Meet. NAA rules will be in effect. Tourney open only to Monroe County builders. Complete info from Elmer Kiefer, Chairman, Kiwanis Model Airplane Club, 108 N. Sixth St.

Creedmore, L. I.; Regular monthly gas meets to be sponsored by the Metropolitan Model League. Info from Irwin Polk, 429 Seventh Ave., New York City.

Philadelphia, Pa.; Regular monthly contests to be sponsored by Philadelphia Gas Model Association. Open to all NAA members. Contact Jack Schwartz, 1742 N. Peach St., Philadelphia, for all info.

"Petrel" Gas Job

Magnamious! Colspendous! Gilosol! They're the only words to use to explain this hot-shot, big-bug, little gas buggy! Yes, fellows, Nick Limber—that lad who supplies us with so many top-flight models—has really gone to town in a big way with this "Petrel"! She's a lulu, she's a honey, she's a beaut, and she's all the other pet names you've heard used on movie trailers! And if you want to keep "in tune" for the rest of your modeling year, then take our advice and build this sweet-singing "Petrel" right away!

By Nick Limber

SOARING GRACEFULLY OVERHEAD, the latest gas buggy designed by ye author presented the appearance of a tiny petrel—that small black bird lauded by sailors and marveled at for its ability to remain on wing day and night. Thus, this month's top-notch flyer was dubbed the "Petrel" because her colors and markings make her look like the real thing in flight.

Our model's sleek black fuselage glistened in the sunlight, and occasionally the bright yellow of its tail and wings became visible as the craft banked into a smooth turn. (Just listen to me get poetic about my own job!)

Anyhow, that's a partial description of what our newest baby gas job looked like on her first flight. Of course, we could go on for pages and pages—but you lads probably are tired by now and would like to start work on your own "Petrel" pronto. So let's just skip the gab and start to work, huh?

CONSTRUCTING THE FUSELAGE

THE BODY SIDES are made completely of sheet balsa. The sides are carved to the outline shape shown on Plate 1 and then sanded with a fine grade of paper until they are smooth. Reenforce the sides with $\frac{1}{8}$ " balsa strips placed as indicated. When the two sides have been completed, glue cross-braces in place and then turn to the fuselage's top and bottom.

Cover the top of the body after the cement on the cross braces has dried thoroughly, leaving about an eighth of an inch of balsa protruding over the sides; this extra wood can be cut off later and sanded to shape.

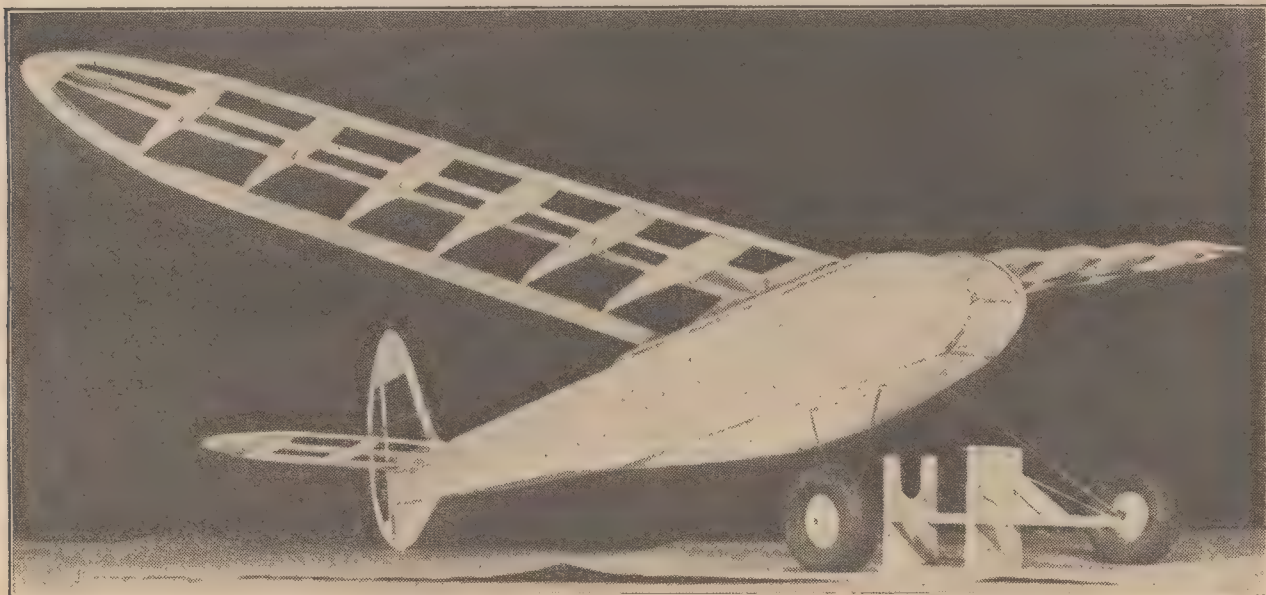
However, the top is to be covered only from the first cross brace—which begins near the trailing edge of the wing—to the tail post. The bottom covering of the body begins at the second brace and continues back to the under section of the tail post.

The belly of the ship—from the second cross brace forward—is temporarily covered with a strip of soft balsa, 18" by $2\frac{1}{2}$ " by 1". Cement the belly in place with dabs of glue and let it stand for several minutes until dry. Then carve to a well-rounded shape and finish off with varying grades of sandpaper. For the cross-sectional form of the belly-block, refer to the front view of the model on Plate 1.

Carefully remove the block by prying it off with a knife, and cut two slots in the belly where the landing gear wires run through it. After these have been made to your satisfaction, shape the landing gear from $3/32$ " wire, place it in the slots as indicated, and cement the block firmly in place. The main portion of the fuselage is now complete.

The motor-mount bulkheads are made of $\frac{1}{4}$ " spruce strips. The engine-bearers are formed from $\frac{1}{4}$ " by $\frac{1}{2}$ " bass wood. Small screws and cement are used to join the various parts of the mounting together. Note that the bulkheads also act as braces for the landing gear, and are therefore slotted at the bottom.

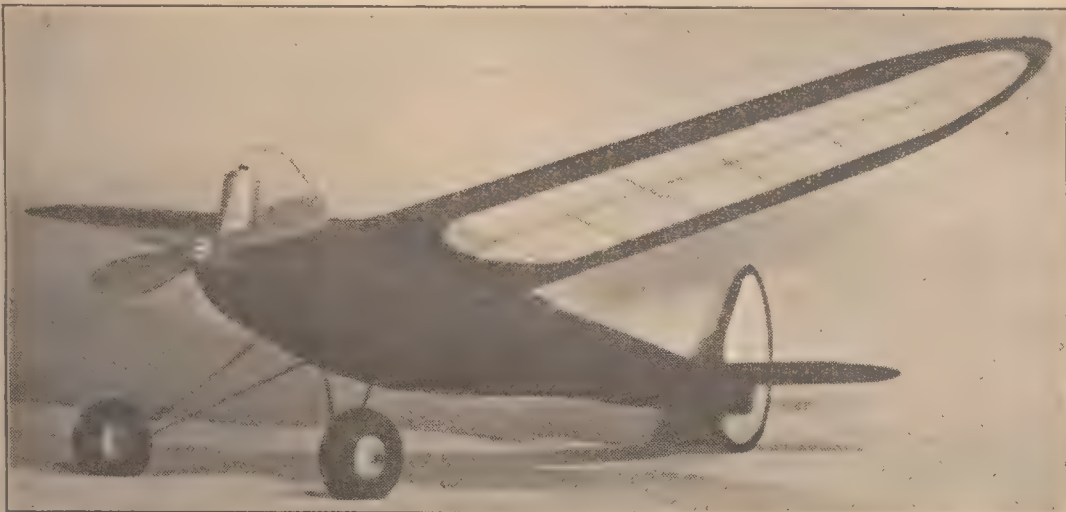
Slip the motor-mount into position, and with screws and cement fasten it to the fuselage. The nose block is carved from a hard block of balsa, $3\frac{7}{8}$ " by $1\frac{1}{8}$ " by $2\frac{1}{2}$ ". Full-size profile drawings are furnished on Plate 3 of our plans. Trace the outline onto the block and cut



First off, we offer you this skeleton shot of the "Petrel," in which most all details of construction can be readily seen. See that gadget right in front of the ship? Well, you're wrong, it's not used on a guillotine. That's really the motor mount for our hi-flying gasoliner!

TURN THE PAGE FOR PLANS OF THIS NOVEL GAS JOB

With her covering, motor-mount, and engine in place, the "Petrel" now truly looks like its bird cousin, don't you think? And the fuselage was especially designed by our versatile model engineer, Nick Limber, to give her that "pencil" streamlining that you boys go for in a big way. And even though the balloon tires seem to be a little bit deflated, we're sure that it's not from the craft's weight, but from the usual lack of air. Nick, you know, is not so hot at slinging wasted "gas!"



out with sharp knife or razor. Then, after your carving job has been completed, sand the nose-block to a smooth finish. After fitting to the fuse-

lage, cement the block in place with a liberal amount of glue and allow it to harden firmly and securely.

WINGS AND TAIL ASSEMBLY

ALL WING RIBS are cut from 1/16" sheet balsa. The spars, made of hard balsa, are 1/4" by 1/8". The leading edge is of 1/4" square strip balsa. The trailing edge is a 1/8" by 1" strip, shaped as indicated in the cross sections. Sheet balsa of 1/4" thickness is used for carving the wing-tip formers.

In constructing the wing, first pin down the lower spar and glue each rib in its correct position. Note that the wing layout on the plans is drawn to 1/4 size, while the ribs and other parts are full scale. Insert the top spar into the ribs in the notched-out sections and cement the trailing edge in place. Two spar braces of 1/16" sheet balsa are then carved to the shape indicated on Plate 3 and cemented to the spars across the center-section. This automatically gives the wing the proper dihedral angle. Note that the amount of dihedral required is 4 inches at each tip. Allow the structure to harden and then place the leading-edge in position. The wing-tips are next carved and glued in place in the usual manner.

The elevator ribs are made of 1/16" sheet balsa. The leading edge is of 1/4" square strip. The trailing edge is of 1/8" sheet. The spar is of 1/4" square strip, while the tips, like the trailing edge, is of 1/8" sheet. The elevator is constructed in a manner much similar to the wing.

The leading and trailing edges of the rudder are made of 1/8" sheet balsa. The spar is formed from a strip of 1/8" square. And the ribs are of 1/16" sheet.

Before attaching the tail-unit to the fuselage, decide definitely what materials you intend to use to cover the craft. Bamboo paper or silk are the logical and most popular materials to use. The usual covering, however, is bamboo paper, so let's proceed with general instructions for that

type of "sheath". Apply dope to the wing framework and attack the covering. Mix your dope, as we have told you in the past, with an equal amount of heavy cement and be sure that it is evenly smeared over all portions of the frame to which covering will be attached. Make doubly certain of this when the under-surface of the wing is being covered.

Clear dope may be sprayed or brushed on the covering to tighten the paper. However, if the builder desires, he may paint the model directly with pigmented dope.

Coloring of the ship depends entirely upon the builder. However, the original "Petrel" was black with yellow wings and rudder. Of course, other schemes may be used, but consider its power to be visible at great altitudes when making such a choice. Thus, in selecting the colors, the builder must consider on a scientific and not artistic basis.

The tail-unit, after covering, is fastened to the fuselage with a liberal amount of cement. Make certain that the assembly has been properly set before the cement hardens.

A balsa wing-mount is carved and cemented to the bottom of the wing. The wing and mount are held to the fuselage with rubber bands.

Wheels used on the ship should be of at least 2 1/2" in diameter. They are attached to the axles in the conventional manner and should be lined up to a true parallel.

The model was designed to be powered by any small bore engine. A 10" prop with about an 8" pitch is used. Placement of the battery box should not prove difficult as it is only a matter of balance, the balsa covered bottom of the fuselage permits an excellent support for this unit in any location.

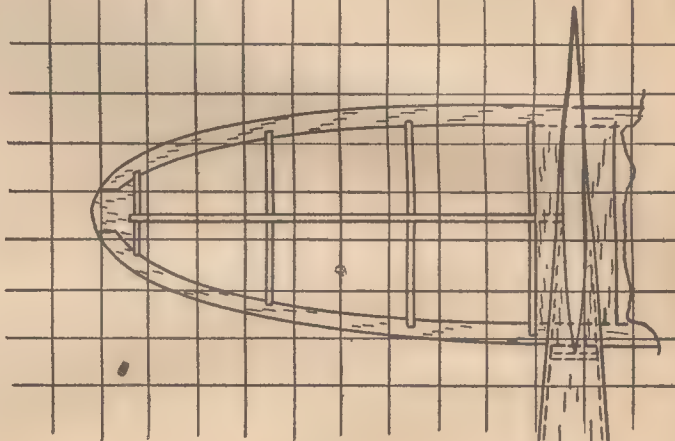
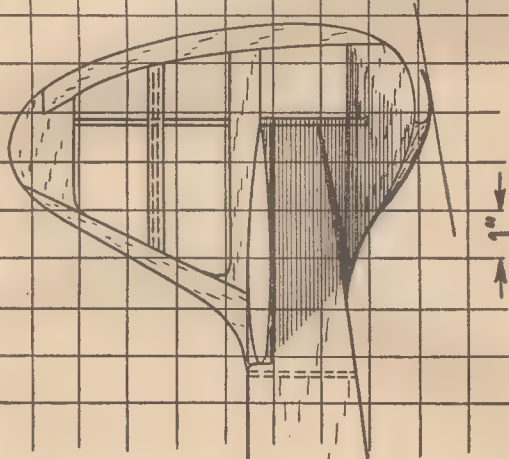
TEST FLIGHTS

DO NOT, under any conditions, fly the model until it has been balanced after the motor and ignition system have
(Continued on page 79)

BILL OF MATERIALS

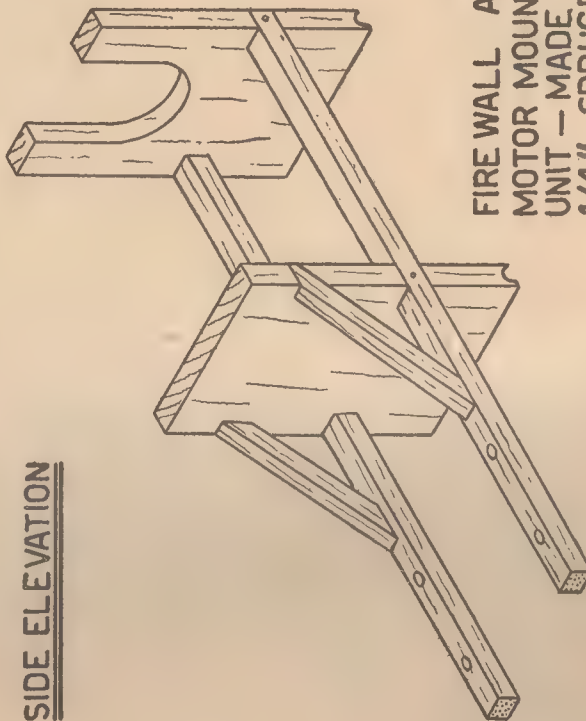
Five strips 1/4" by 1/8" hard balsa for wing spars;
Four strips hard balsa 1/4" sq. for leading edge, etc.;
Four sheets 1/12" medium balsa sheet for fuselage and ribs;
Three sheets 1/8" medium balsa for fuselage sides, etc.;
Two strips 1/8" medium balsa for trailing edge;
One piece 1" by 2 1/2" by 18" soft balsa for fuselage belly;
One piece 3/8" by 1 1/8" by 2 1/2" hard balsa for nose;
One sheet 1/4" spruce for motor mount bulkheads;
One strip 1/4" by 1/2" bass for engine bearers;
One sheet 1/4" medium balsa for wing tips, etc.;
One length of 3/32" wire for landing gear and tail skid;
One piece of 14" by 2 1/2" by 1" hard balsa for wing mount;
One pair of air wheels at least 2 1/2" in diameter;
Bamboo paper for covering, cement, colored dope, pins, glue, scrap balsa sandpaper, razor blades, and all the rest a good modeler needs.

THE "PETREL"



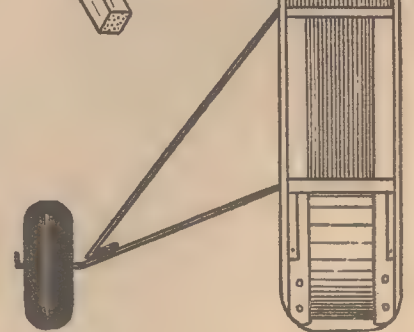
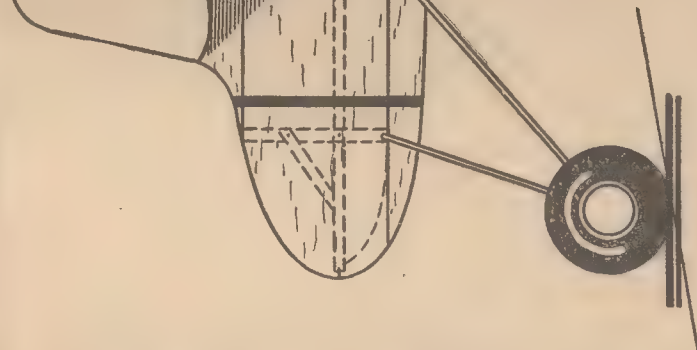
LANDING GEAR AND
TAIL SKID MADE OF
3/32" WIRE

FIRE WALL AND
MOTOR MOUNT
UNIT — MADE OF
1/4" SPRUCE



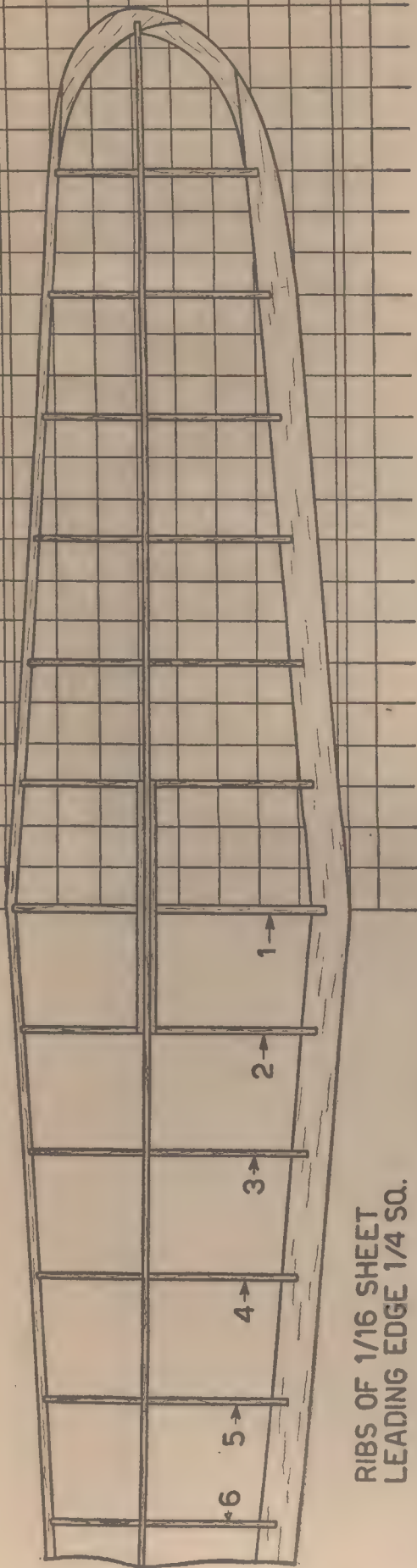
SIDE ELEVATION

TOP ELEVATION

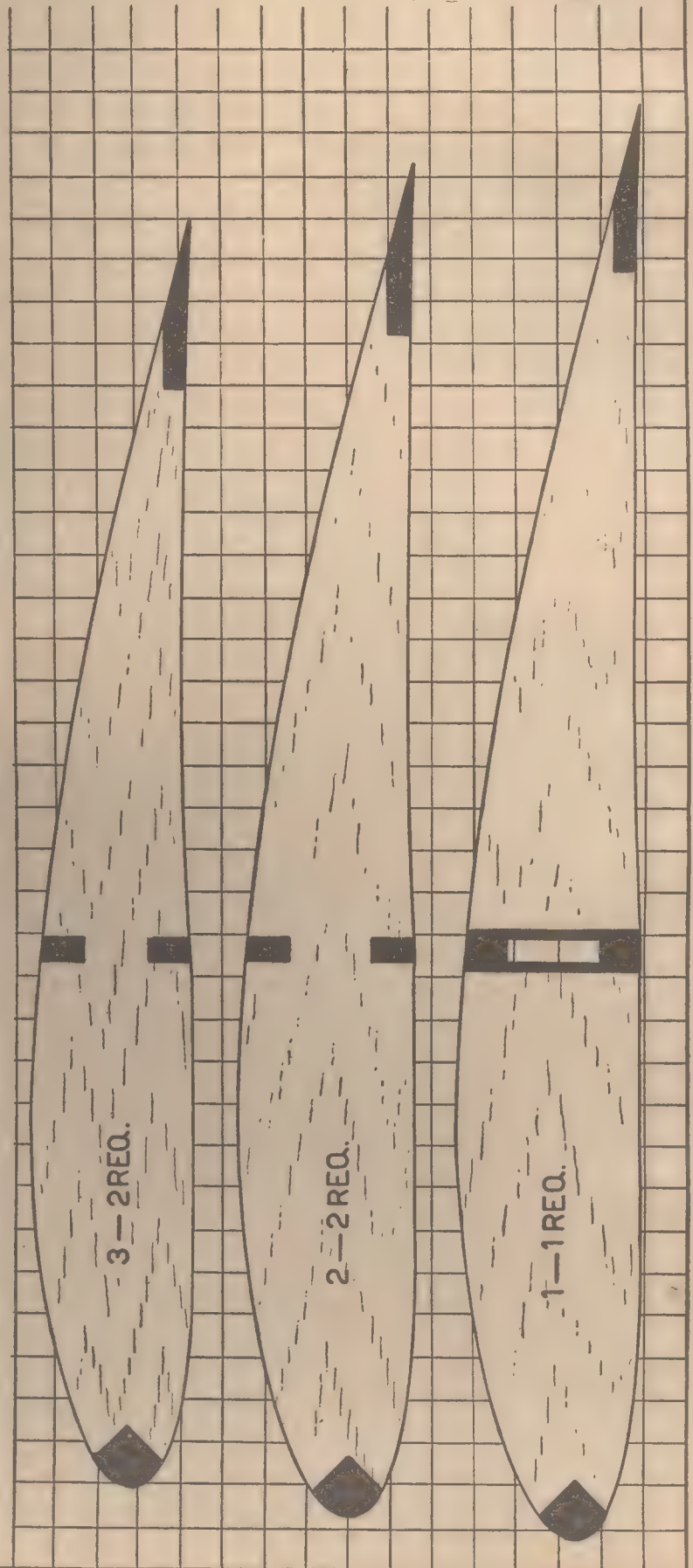


A FLYING ACES MAGAZINE PLAN

TRAILING EDGE $1\frac{1}{8}$ "
SPARS $\frac{1}{8}$ "— $\frac{1}{4}$ "

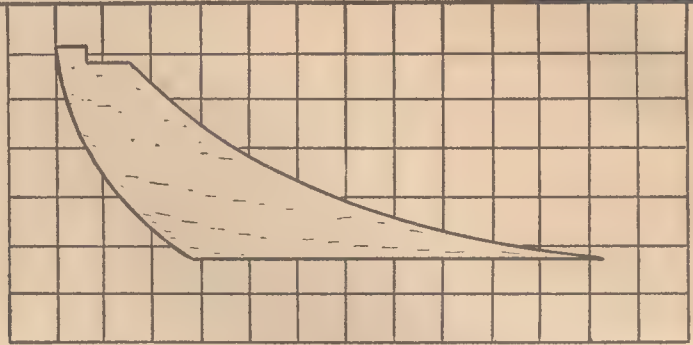


RIBS OF 1/16 SHEET
LEADING EDGE 1/4 SQ.

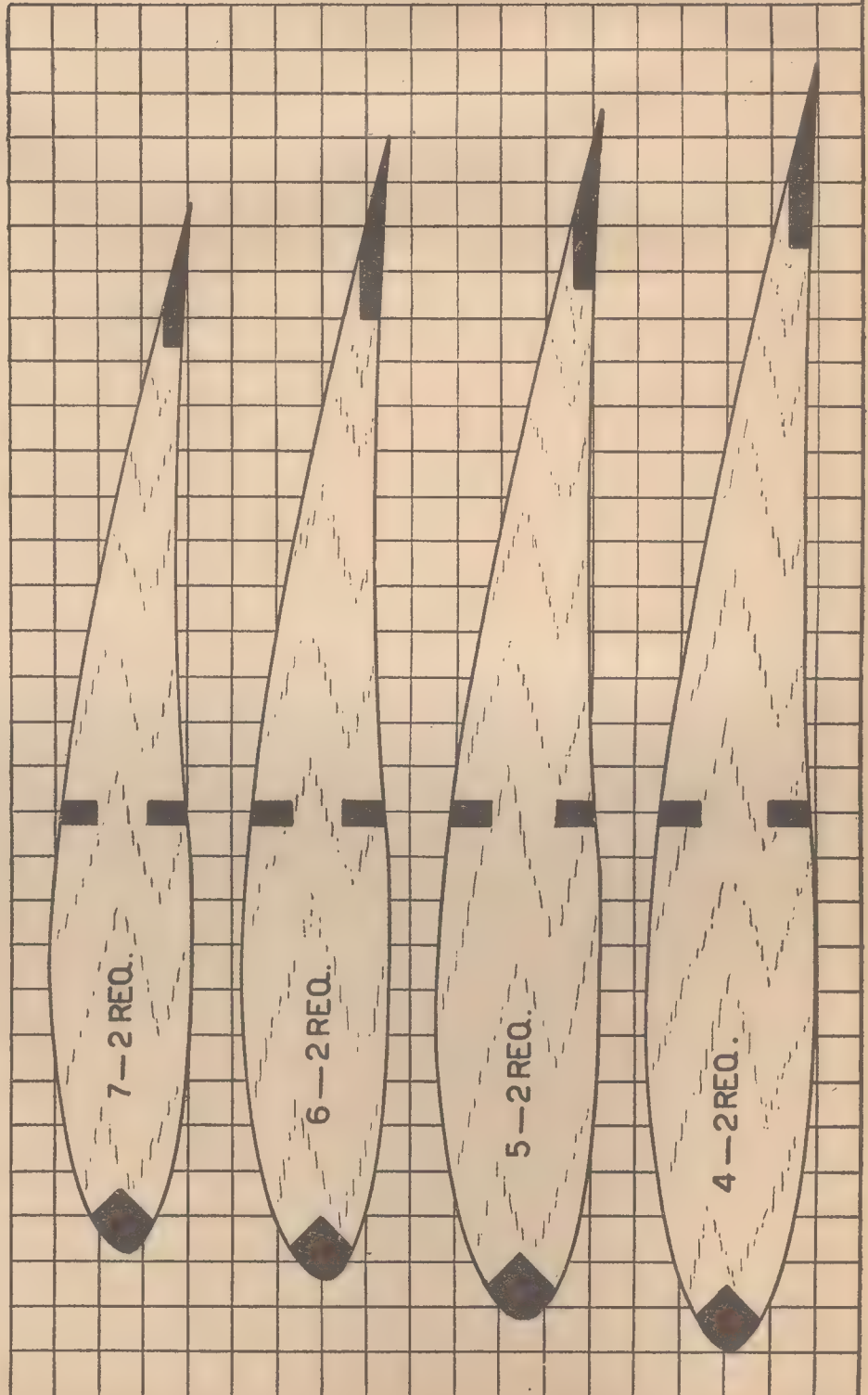


LAYOUTS FULL SIZE

SPAR BRACE 2 REQ. OF 1/16"
SHEET



PROFILE OF NOSE BLOCK



DIHEDRAL 4" AT EACH
WING TIP

FRONT ELEVATION

SKETCH OF WING MOUNT
NOT TO SCALE



INSIGNIA PASTED ON RUDDER



A FLYING ACES MAGAZINE PLAN

Modelers' News

(Continued from page 43)

the poor weather, and it continued until it was too dark to fly any longer. Although no records were established, times were good. The winners follow:

Gas: Open—First, George Gaydos; second, Bill Gowan; and third, John Eberlee. Senior—First, Max Wassen. Fuselage: Junior—First, Bill King. Senior—First, Jack Thames; and second, Max Wassen. Open—First, Mike Modrak; and second, Dick Everett. Stick: Senior—First, Joe Boyle; and second, Jack Schneider. Open—First, Dick Everett; and second, Charles Sholes. Glider: Open—First, Ed Fulmer. Senior—First, Jack Thames; and second, Joe Boyle. Junior—First, Bill King.

ACCEPTED RECORDS ANNOUNCED

HERE'S a list of model records accepted by the NAA as official. We're noting the times here in case any of you fellows would like to take a crack at them.

Indoor: Stick, R.O.W., Open: Class A—Merrick Andrews, Philadelphia, 8 min., 53.4 sec. (made under old rules and not now official); Fuselage, R.O.G., Senior: Class B—Bill Hayes, Syracuse, N. Y., 8 min., 29.2 sec.

Outdoor: HL Stick, Senior: Class C—Ed Swenton, Syracuse, N. Y., 11 min., 37.3 sec.; Open: Ira Fralick, Syracuse, N. Y., 4 min., 27.5 sec. Tow-Line Glider, Class D: Junior—Paul Blackman, Philadelphia, 21 sec.; Oscar Boyajian, Hartford, Conn., 1 min., 30.9 sec. Fuselage, R.O.W., Senior: Class D—George Kesel, Liverpool, N. Y., 10 min., 38.7 sec.; Open—Al Towle, Syracuse, N. Y., 5 min., 08.8 sec. Cabin, R.O.G., Gas, Senior: Class E—Bob Jacobsen, Philadelphia, 6 min., 51.3 sec. Dan Veronica, Buffalo, N. Y., 17 min., 32.9 sec. Open

—Martin Nemirofsky, Philadelphia, 1 min., 16.5 sec. Clarence Quillin, Buffalo, 8 min., 20.8 sec. Gas, Power Class C, Open: Class E—Hank Struck, Jackson Heights, N. Y., 5 min., 38 sec. Gas, Unlimited, Open: Class E—G. E. Sherhod, Chicago, 36 sec.

CHERRY HILL WINNERS

THE Silk City Gas Model Club ran a tourney at Cherry Hill Airport, near Patterson, N. J., on Sunday, June 11. The winning fellows were:

Class A: First, Sal Taibi, 57 sec. on one official flight; and second, Frank Ehling, 55 sec., also on one official flight. Class B: First, George Morrow, 3 min., 27 sec.; second, Gordon Murray, 3 min., 15 sec.; and third, Frank Ehling, 2 min., 36 sec. Class C: First, Kurt Hildebrand, 5 min., 44 sec.; second, Jack Moore, 5 min., 20 sec.; and third, W. A. Westcott, 5 min., 1 sec.

On one hop, Sid Scherer turned in 4 min., 27 sec. with his job, which proved to be the best single flight of the day.

LEWIS TO NAA

AL LEWIS, well-known model aeronaut and designer of plans that have appeared in FLYING ACES, is now boss of the NAA's Model Division in Washington, D. C. Al will be the personal representative of all model airplane builders and flyers in aeromodeling affairs.

MODELING BY ETHER!

HAVE you lads heard John B. Gambling's "Model Airplane Club of the Air" on Saturday mornings on the Mutual radio network. Well, if you haven't you're missing something good! The program, which is written by Stan Coe, runs fifteen minutes. Prominent authorities in the modeling game appear as guest speakers every week.

What Do You Say?

Here's your corner, buzzards, and it's open to all readers who have a model argument they want to get off their respective chests. Make your comments short and snappy, and we'll try to squeeze 'em in.

AN "ORBIT" BOOSTER

Model Editor, FLYING ACES:

I wish to commend you upon the fine gas models you are publishing in FLYING ACES. Previously I had subscribed to another good mag, but after building Martin Powell's *Orbit* (June, 1939, F.A.) I became a FLYING ACES fan.

This model is the most versatile I have ever seen, inasmuch as I have flown it with both wheels and floats. I have also tried it with four different motors, all of different power.

MORRIS GELBFISH,
Miami Beach, Fla.

Workbench Tips

HOLES WITHOUT DRILLS

MANY of the kits for scale models contain only solid noses, then the instructions in most cases say to insert a nose-plug. Well, that's okay for the modelers who have drills, but if you don't have any on hand and no money to buy them, do this:

Work a small nail through the nose-block, then push a stove bolt back and forth through the block to enlarge the hole. But because the rough edges of the bolt wear away the wood quickly, don't make the hole quite full-size for the plug yet. Instead, wrap a piece of sandpaper around the bolt and then finish the hole to the desired size.

—CECIL DUNCAN



ALL REVVED UP for the NEXT GREAT FLYING ACES

FACT—David Martin's revealing, drama-filled article on Italy's air force—dominator of the Mediterranean. A striking, photo-packed feature.

Right after he read our article, "A Model Builder Learns to Fly," Balsa Fan Fred Parfitt went after his wings, too! The story of his adventures is a darb. Don't miss it.

"If Britain Bombs Berlin"—a stirring cover painting and the story behind it.

FICTION—Philip Strange returns in a smashing mystery of World War skies.

Kerry Keen pops up with a sleek new plane. A swell yarn—plus plans for the ship. And sure—another rollicking riot starring Phineas.

MODEL BUILDING—Full plans for Joe Osterman's rakish "Mid-Wing Speedster."

The "Galloping Gull"—a nifty, low-wing stick.

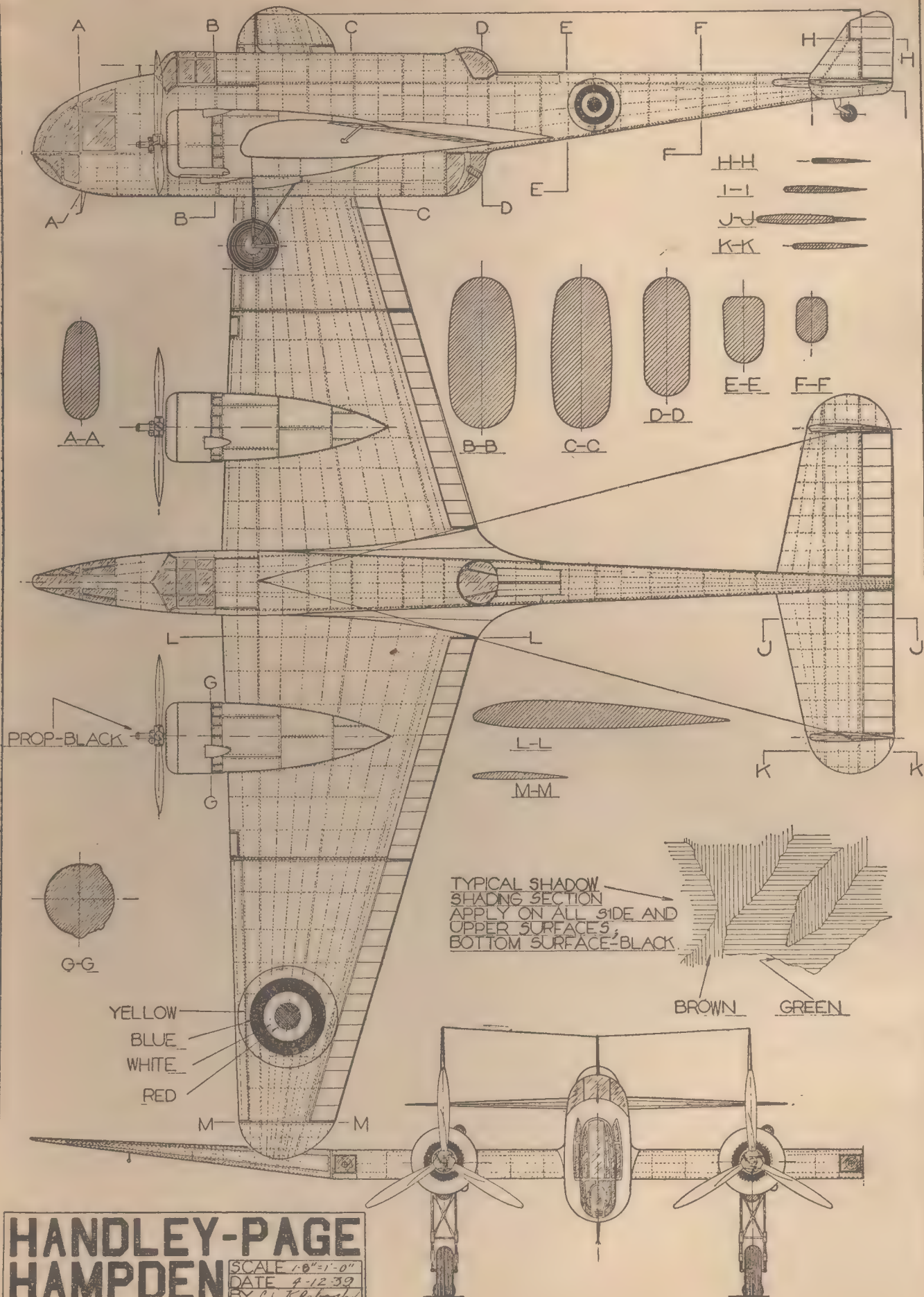
Ben Shereshaw's pertinent do's and don'ts in making radio-controlled models.

In November FLYING ACES



On Sale SEPT. 27th. (Canada One Week Later)

CONSTRUCT A SOLID HANDLEY-PAGE "HAMPDEN"



Fighters That Time Forgot

(Continued from page 4)

them, the three men reached the speedboat which the frightened prisoner pointed out. There was no one else aboard. Knight covered the man while he started the engine, and in a few seconds Doyle had cast off and they were darting out into the bay.

"Throw her in neutral," Knight ordered after a few moments, when the glare of the burning cars ceased to reflect across the water. "Now, we'll finish those questions. First, who are you?"

"I'm Frank Parke—used to be an airline pilot," said the captive sullenly. "I tell you I don't know anything about this business—I was hired just to—"

"What's the idea of those bodies hanging from the Clipper?" demanded Knight. "You'd better forget that dumb story, Parke—or whatever your name is. Unless you talk straight and fast, you're going back ashore—and I'll give you one guess what that mob will do to you."

"And suppose I tell them you're wanted for murder and treason by—" Parke stopped short as Doyle drew back his fist.

"Never mind, Lothario," said Knight. He stared through the gloom at the prisoner. "So you know I'm wanted. That's been kept pretty quiet. Just how did you learn about it?"

"Ask him if he's got any friends who go around playin' with black-jacks," Doyle added savagely.

A searchlight from a yacht inshore made a circle of the bay, lifted to where the Coast Guard plane was desperately battling the two pirate ships. By the glow reflected on the water, Knight saw the tense look on Parke's face, and for the first time he noted two fine white scars, one under each eyebrow, little more than lines extending to his temples.

"So that's the answer!" he exclaimed. "Plastic surgery—no wonder I can't hook up that voice with your face!"

The other man started violently, jerked back as Knight bent over him. Before Knight could see what he was up to, Parke's left hand hit the throttle. The speedboat leaped ahead, and Knight plunged headlong into the bay.

CHAPTER II

BETWEEN TWO FIRES

Knight's finger closed spasmodically on the trigger of his gun as he went overboard, and a shot blazed across the gun-whale of the boat. When he came up, still clinging to the gun, the yacht searchlight was stabbing after the speedboat, which was zigzagging crazily back and forth.

"Dick, old man—where th' devil

are you?" spluttered a voice a few yards away.

"Doyle!" said Knight, startled. "What happened—did you wing him?"

"No, he's just tryin' to shake off that light," Doyle said disgustedly. "It all came so fast I thought you'd been shot when you fell overboard."

"So you dived in to help me," Knight finished it for him. "Thanks, Lothario—it's too bad I was fool enough to fall for that trick."

Doyle swam alongside, and they started back toward the boat landing. A rocket suddenly went up from the speedboat, burst into a red star, and almost immediately Knight saw the pirate Clipper nose down. The Coast Guard Douglas was now less than 600 feet above the bay, coming down for a landing, with the Corsair circling tightly above it.

"The Douglas must've been hit," Doyle panted. "Those Coast Guard johnnies don't give up that easy."

The Corsair banked sharply, raced across at the yacht with the searchlight, and a short burst smoked down through the beam. The light went out, and as the Corsair zoomed Knight heard the moans of wounded men on the yacht. Doyle and he were within fifty feet of the second pier when furious voices became audible from up on the landing.

"To hell with the police!" a man snarled. "If we catch those killers, we'll handle them ourselves."

"Hanging's too good for the rats," another man said fiercely. "I say, burn them alive if we get them!"

Knight reached out, gripped Doyle's arm in the darkness. "Under the pier," he whispered. "If they see us, we're lost."

In a few seconds they were under the landing, clinging to the cross-bracing of the piles. The thunder of the Coast Guard ship, taxiing closer, drowned the voices above, until the engine abruptly died.

"Fend off that wing!" a mechanic shouted from the bow. "Somebody phone for an ambulance—our pilot's hurt bad!"

The amphibian bumped against the pier, its bow only a few yards from where Knight and Doyle were hidden. There was a confused babel of voices as the wounded pilot was lifted onto the landing, then some one broke in with a yell.

"Look! The Pirate Plane's landing! They're picking up those guys that got away in the boat."

"Get out there after them!" bawled another man. "Come on—we can use my boat, and I've two guns aboard."

"Th' poor fools are committin' suicide," muttered Doyle. "They'll be cut to pieces."

"Did you hang onto your gun?" Knight whispered.

"No, it fell overboard," Doyle said. "Why, what are you thinkin' of?"

"We're going to hijack that Douglas," Knight said in an undertone. "There doesn't seem to be much of a crowd above now and they're watching the pirate plane. Follow me up that ladder on the other side."

The Clipper was landing, its lights streaming across the water before it, as Knight warily lifted his head above the pier. Two Coast Guardsmen and half a dozen civilians were standing near the Douglas, intently eyeing the pirate ship. Knight tiptoed across the wet boards, Doyle hastily climbing up behind him. The Irishman bent over and quickly cast off the bow line of the amphibian. One of the Guardsmen turned as the Douglas edged away from the pier. When he saw Doyle crouching in the bow he let out a wild yell.

"Keep back!" Knight said crisply. "We're Government men, and we're taking that ship."

"Pirates!" screamed a man back on the landing. "Help, they're stealing the plane!"

The second Guardsman leaped past and launched a furious blow at Knight's head. The fugitive agent jumped back, caught the man's chin with a smart left hook. He fired two shots above the heads of the onrushing men, turned and sprang onto the bow of the Douglas. His leap sent the plane several feet away from the pier. Doyle was already in the cockpit, cutting in the switches. An inertia starter whined, and the starboard motor roared to life. The amphibian's wings grazed the landing, and by the time Knight reached the cockpit the ship was headed out into the bay. Doyle cut in the port motor, relinquished the controls.

"There's another drum or two of ammo out by that bow gun," he shouted. "I'll be gettin' set for th' dirty butchers."

He clambered out behind the Browning. Knight wiped his dripping hands, took the controls. The Clipper was starting to take off, the empty speedboat bobbing on the swells astern. He shoved the throttles open, aimed the bow of the amphibian at the tail of the fleeing pirate ship. The Douglas hit the first swells, bounced touched again and began to climb. Knight's eyes gleamed as Doyle swiftly opened fire. The Clipper was still on the water. If they could cripple it, they might capture that unholy crew alive.

BUT the hope was dispelled in a flash of tracer from above. In a shrieking dive, the Corsair pitched down after them. Fine lines of fire lanced through the starboard wing, leaped in toward the hull. Knight jerked the throttles, and the tracers whipped a hundred feet ahead of the ship. The Douglas started to settle, picked up as the engines went full on again. Doyle sent a blast flaming

up at the Corsair, splintered the rear cockpit enclosure as the pilot banked for another attack.

For a second, Doyle's tracers and those of the Corsair's cowl-guns seemed to melt in a fiery embrace. A hail of lead spanged into the port fin of the Douglas, swerved crookedly across the wing. Then the Corsair pilot chandelled, with Doyle's bullets gouging at his tail.

Knight instantly zoomed, his eyes fixed on the fleeing Clipper. Just below the tail of the now rapidly climbing ship, he leveled out, and Doyle poured a battering fusillade into the tail-group. The Clipper nosed down, and for a moment Knight thought they had wrecked its elevators, but a blast from across the tail showed him the true reason. A special hatch, well aft, had opened, and a helmeted gunner was crouching behind a blazing twin-mount.

The starboard windshield of the Douglas, already punctured in several places, went to pieces under the crashing slugs. Knight hurled the amphibian under the pirate ship, just in time to save Doyle from annihilation. The Irishman tilted his gun, pumped two fast bursts into the vast hull above. The Pirate Plane yawed, banked into a hasty turn, and before Doyle could re-align his guns the Corsair pilot was back, his tracers crackling across the bow.

From five or six vessels in the harbor, searchlights were pawing the sky. Knight alternately cursed and blessed them as the beams first blinded him and then the Corsair pilot. The Pirate Plane was forging steadily ahead, making straight for the sea. In a few minutes, he realized it would be able to hide itself in the clouds which hung at 4000 feet.

"Hold it!" he shouted at Doyle, as the Irishman swerved his Browning for another try at the Corsair. He ruddered away from the nearest searchlight, zoomed up to the Clipper's level. The big ship had not reached its top speed, and he was able to draw parallel with the bridge. Doyle crashed a furious barrage across the control-room. Dim lights within showed several figures moving frantically about, then the light went out and an answering fire from the starboard side hammered into the hull of the Douglas.

Knight slammed the controls down, but from the other side of the ship a second blast crashed into the Coast Guard plane. The Corsair, riding down a light beam unnoticed, had trapped them between two fires.

It was too late to dive under the pirate Clipper. Knight plunged head-on at the monster ship. The Clipper's nose pitched down as the pilot wildly sought to avoid collision, and at the last instant Knight jerked the Douglas into a tight chandelle, his keel barely missing the Clipper's rudders. The Corsair pilot had reversed to keep from following the amphibian into what seemed certain disaster.

"Get the Pirate Plane!" Knight bellowed at Doyle. He whirled the

Douglas through a weaving light beam, sent it roaring down beside the Clipper. The searchlight followed, focussed for a moment on the flying-boat, grimly spotting the dangling corpse under the starboard wing, and the hideous death's head emblem on the bow. As the Douglas thundered in, the glare disclosed two white faces staring out from the bridge. One was that of a gunner, and the other Knight recognized as that of the man who had called himself Parke.

Two bursts flamed across the intervening space, as Doyle and the pirate gunner both went into action. The gunner tumbled down, his weapon tilting through the shattered glass where Doyle's burst had struck. With a maniacal glare on his face, Parke sprang to seize the gun. Knight ruddered to give Doyle another shot, then zoomed steeply as the Corsair pitched in from the right.

Dazzled by the light, the Corsair pilot seemed about to crash headlong into the Clipper. Then he suddenly saw what lay before him and skidded madly to one side. Doyle's last burst drilled into the nose of the Corsair and the two-seater reeled off, enveloped in a cloud of dense black smoke. Two hundred feet down, bright orange flame rolled out of the smoke-cloud, and in less than five seconds the Vought was an inferno.

IN THE GLARE Knight saw that one of the dangling bodies had been shot loose from the Clipper's wing, with only a frayed bit of rope remaining. He was angling back, watching Doyle's desperate search for more ammunition, when through the beam-stabbed sky he saw five ships hurtling across Miami. A sec-



ond later he recognized the outlines of Army A-18 Northrops. The Army pilots were warming their guns, and he knew with a hard certainty that they as well as the pirate Clipper were to be the targets. Banking eastward, he leaned down for a shout at Doyle.

"Get back on the radio! Signal those Army ships!"

The Irishman took one look, scrambled back into the cockpit. "A fine time they pick for showin' up! Chapman Field must've been asleep."

"They're not asleep now," Knight said grimly. "They've undoubtedly been tipped off about the Douglas being stolen, and unless we work fast it's going to be too bad."

"I'll give 'em th' Patrol identification signal," Doyle said tensely. "If they don't believe it—Holy smoke!" he suddenly cried.

"What's the matter?" demanded Knight.

"Th' transmitter—it's done for!" groaned Doyle.

Knight shot a glance back toward the Northrops. They had cut the distance in half, and to his dismay three Navy Grummans had appeared from the direction of Opalocka Field. He pulled the amphibian into a steeper climb.

"We'll have to run for it, Lothario. Those birds are out for blood."

"Maybe they'll go after th' Clipper," said Doyle, hopefully. But a moment later the three Grummans lined out after the Douglas, while the A-18's held to the trail of the Pirate plane. The Clipper was almost into the clouds when the attack ships opened fire. With a little zoom, it disappeared in the mists, its hull reappearing for a second or so, then vanishing completely. The A-18's spread out and climbed into the clouds. Knight drew a long breath of relief.

"We've got the Grummans outranged—but if those Northrops had come back at us, it would have been curtains."

A few scattered bursts smoked to right and left of the Douglas, but the tracer lines curved downward before they could come dangerously close. Knight climbed into the clouds, turned north and flew on instruments for several minutes.

"I'd give my right arm for a stiff drink right now," said Doyle. He wiped his perspiring face, stared as Knight banked the ship and flew East. "Say, you ain't figurin' on flyin' to Europe, are you?"

"Not quite," Knight said.

"Then what's th' idea? You're headin' out to sea."

Knight turned up the rheostat of the cockpit light, and looked gravely across at his companion. "No need for me to tell you we're in a spot. This ship is marked—they'll be looking for it up and down the coast. That pirate-massacre business will be on the radio in no time, and we'd probably be lynched before we could explain. My being in on it would make it look a lot worse, once it came out that I'm a fugitive from the law."

"So what do we do?" said Doyle.

"I might land you on a deserted beach," began Knight.

"That's out," Doyle grunted. "If you've some better idea cookin' around in that head of yours, let's have it."

"There's a small island over in the Bahamas where I hid out for a while with the Four Faces ship," Knight answered. "It used to be a contact point for rum-runners. I was able to get fuel there, and no questions asked. I think I've enough money to put over the same deal this time."

"You're thinkin' those pirates came from somewheres in th' Caribbean?" said Doyle.

"It's an idea," admitted Knight. "And we can hide out on this island until things calm down."

"I guess it's our only bet," Doyle said. "Sure you can find that island

at night? It must be pretty small."

"I think so, if you'll find me a map and—" Knight sat up, motioned for Doyle to take the controls. "That stuff we got from Parke—let's see if they'll help us any."

HE TOOK THE MAP, now badly soaked, from his coat pocket. It was a chart of the southeastern Atlantic coast and the Caribbean area. Between the Bahamas and Bermuda was a dot beside which was a blur of penciled letters, half-obliterated by the water. Knight held the map close to the cockpit light.

"What's it say?" Doyle queried.

"Thursday the 14th, 4 p.m., E.S.T." said Knight. "That's tomorrow."

"Maybe it's another looting!" Doyle said excitedly.

"Looting?" said Knight. "It's about time we got straight on several points. Things have happened so fast I still don't know how much G-2 has learned about those devils."

"Plenty—but not enough," Doyle muttered. "As I said in th' message, General Brett sent me to get you to help us out. G-2, Naval Intelligence, th' F.B.I., and th' Coast Guard are all workin' on this thing. But so far we've not had much luck. It all began about three weeks ago—"

"I thought you said you'd only known about it for a week," interrupted Knight.

"We didn't get th' pirate angle until then," explained Doyle. "Th' first funny business was when one of th' new Clippers disappeared while on a test-run from New York to Bermuda. The Transoceanic outfit has kept it quiet until now, not wantin' to scare th' public. Anyway, they never found a trace of th' ship, but we figured it had gone down with all on board."

"No S.O.S. or other calls?" asked Knight.

"Nary a word," said Doyle. "They did find an oil slick on th' water, but it turned out not to be the right kind of oil. Then six days later one of the British ships, an Empire boat, dropped out of sight flyin' from th' Azores to Bermuda—another test-run, too. Then we began thinkin' it was sabotage, and on top of that the Coast Guard lost a Douglas like this one. It'd gone out to answer a distress call. They'd got a radio that a sailor on a banana boat named *Eldorado II* had got hurt and needed to be rushed to a hospital. The Douglas didn't come back, and when th' Coast Guard checked up they found there wasn't any boat called *Eldorado II*. That's when they and th' Navy started a patrol."

"Then last week an S.O.S. came in from a freighter called the *Hampton*, out of Boston, sayin' they just seen a big plane in a fight with a Navy flyin' boat, and a few minutes later th' Navy birds flashed in word they'd found the Clipper that was supposed to be sunk. Their radio went dead before they could finish th' message, but about half an hour later the freighter came through with a flash

that they'd been bombed and th' big plane was carryin' the Jolly Roger painted on her bows."

"Was the *Hampton* found later?" Knight said quickly.

"No, except for part of a life-boat near where she gave her position. And th' Navy patrol ship—it was a Consolidated—likewise had been sunk—or else been grabbed by those pirate devils. Since then, they've struck twice. Th' very next day they halted a German catapult vessel, circlin' with a threat of bombin' her until the skipper agreed to put all but a skeleton crew out in th' lifeboats. Then some of th' cut-throats boarded her while the Clipper taxied around keepin' its guns trained on th' other boats. They killed two of the crew, forced th' rest to fuel the Clipper, then made off with a boat-load of supplies after they'd wrecked th' two Dorniers the vessel was carryin'."

"Did you see the wrecked ships—or was this simply reported by radio?" queried Knight.

"Th' Coast Guard and O.N.I. saw 'em when the ship put in at Norfolk," said Doyle. "There was no fake about it. Anyway, this afternoon's affair capped th' whole thing. A French liner was stopped and looted of five million in gold they were takin' to New York. The Clipper didn't land this time—they just dropped a bomb close by as a gentle hint, and gave th' Frogs ten minutes to get th' bullion in a boat and into th' water. That's what was in those extras tonight—th' French are squawkin' to high heaven."

"The German incident was kept quiet?"

"After one helluva row," said Doyle. "Th' Government promised to pay th' damages if they'd keep mum for a bit. But now the cats out of th' bag."

"There are some things here that don't fit," Knight said thoughtfully. "Why should they stage that fake battle over Miami, and what was the idea of the bodies hanging from the nacelles?"

"Tryin' to scare everybody, looks like," said Doyle.

"Yes, but why? They must be trying to cover up something, by focusing attention on the pirate angle."

"Seems to me five million in gold is plenty reason for anything," growled the Irishman.

"What about this *Cyclops* business? It seems incredible, but that scrap of paper looks like the real thing. And that petty officer—"

"Yeah, he looked as though he'd been fished up out of Davy Jones' locker," said Doyle. "Those initials 'J.F.J.'—if we could check the *Cyclops* roster—but hell, that ship couldn't be still afloat. She'd have been sure to be seen."

"A queer case, the *Cyclops*," mused Knight. "She was reported lost by the Navy Department, during the World War, with 293 persons on board. She was en route from a South American port with a cargo of manganese—and she simply vanished. The Navy De-

partment gave the date of their last contact by wireless as March 5th, 1918. They had destroyers searching for a month, but never found the slightest trace."

"But where could she have gone?" persisted Doyle. "If a sub didn't get her, what was to keep her from reachin' port?"

Knight shook his head. "You've got me there. Mutiny's out of the question—if only I hadn't let that fellow 'Parke' outwit me, we'd know the answer. That voice of his keeps coming back to me, but I can't place it. He's had his face altered by plastic surgery, that much is clear. If it was done to keep anyone from linking his real identity with this pirate affair, they must have planned it a long way back."

"Better look in that wallet of his," suggested Doyle. "Might be something of help."

"That's right, I'd forgotten it for a minute." Knight gave Doyle the controls, opened the wallet. "H-m-m, he was well supplied with money. I'll just hang onto this—it'll help finance that trip we're going to make."

"What trip?" Doyle said. "You mean, out to that spot marked on th' map?"

"It's our only clue," answered Knight. "There's nothing in here to help us. We'll have time to get a little shut-eye, fuel up, and get some ammunition for that gun—.30-.30's aren't hard to find on the island, if you've hard cash."

Doyle turned, waved lugubriously back toward the coast.

"What's the trouble, Lothario?" said Knight.

"I'm just biddin' goodbye to a little red-head I was hopin' to see in Miami," mourned Doyle. "Th' next time she sees me, I'm liable to be swingin' by th' neck under that damn Clipper."

CHAPTER III

MYSTERY SHIP

IN THE EDGE of an unbroken expanse of clouds, the Douglas was cruising northeast from the island where they'd just got ammo and fuel. They were now over an ocean as leaden gray as the sky, patched here and there with masses of floating seaweed. Richard Knight looked at the clock, still set for Eastern Standard Time. The hands showed nine minutes to four.

"We're just about to that position shown on the map," he said to Doyle. "Looks as though we've come on a wild-goose chase."

"It's sure an empty-lookin' bit of water," agreed the Irishman. "Are you sure you didn't slip up on th' avigation?"

"Not enough to be more than a few miles off. And we can see for at least twelve miles, even with this haze."

Another minute passed, then Doyle

sat up quickly. "Over to starboard—isn't that th' smoke of a ship?"

Knight banked the amphibian, reached for a fieldglass. "It's a freighter," he said after a second. "We'll stay up in the edge of the clouds and fly over her."

In three minutes they were circling above the vessel. Knight frowned, took another look through the glasses.

"Queer," he muttered, "she's not underway—just wallowing there in the sea. And I can't see a soul on deck."

"What's that flappin' back and forth, on th' super-structure?" exclaimed Doyle.

"It's a tarpaulin." Knight focussed the glasses again, while Doyle took the controls. "There's a peculiar thing—that's an air-raid detector under the tarpaulin. I can see two of the horns. She isn't flying a flag. And from the way she's rolling I'll bet there's no one at the wheel. Go on down, we'll take a closer look."

Doyle glided down within a hundred feet, flew twice around the mysterious freighter. Still no one appeared. Knight looked carefully about the sky, then at the iron jacob's-ladder on the side of the freighter's black hull.

"Stall her in," he ordered. "I'll get out on the wing and jump for the ladder."

"You're crazy!" expostulated Doyle. "How do you know what's on board there?"

"I still have a gun," said Knight. "And if anything bobs up, I'll cut my visit short. Keep the engines going and hold the plane just about even with that ladder after I get aboard."

Doyle swore, but cut the throttles. The amphibian moaned down, bounced across a swell and settled. Knight crawled out onto the starboard fin of the hull, climbed up on top of the cabin and out along the wing. Twice Doyle made an approach, missed and had to let the plane drop back. The third time Knight seized the iron rungs and drew himself up, as Doyle ruddered away to avoid hitting the vessel.

THE FIRST THING Knight saw when he reached the deck was an uncoiled line near the Number Two boat davits, as though some one had stopped in an attempt to lower the boat. He peered into the cargo well, made an inspection aft, then entered the quarters compartment beneath the superstructure. Here there was no particular sign of disorder—simply deserted staterooms. A magazine lay open in a bunk, with a squashed-out cigarette in an ash-tray close by. With his sense of uneasiness growing, Knight climbed to the bridge.

There was not a man to be seen. The wheel rolled lazily to and fro, a lashing-line hanging from one spoke. Dividers and ruler lay on a chart. Knight went over to the ship's log, and his eyes narrowed as he saw that the entries were made in German. He was thumbing back through

the pages when from outside came the thunderous roar of the amphibian's engines, gunned three times with a hasty note of warning. Knight hurried out onto the wing of the bridge, started at the sight of a long black hull emerging from the water. It was a huge submarine, and its snout was pointed straight at the Coast Guard plane.

Knight swung his legs over the rail of the bridge-wing, poised swiftly and dived. He struck the water a hundred feet from the amphibian, came up to find Doyle ruddering in toward him. As he grasped the fin, the Irishman leaned down to haul



him aboard, and in the same instant an angry shout echoed across the water.

"Mache Schnell—they will get away!"

Knight tumbled, dripping, into the cockpit. "Take off!" he gasped. "It was a trap. They must have heard us coming and got everybody into the sub, in case it proved to be a squadron."

Doyle seized the controls, and the engines roared. Just off the port wing, bullets kicked up little fountains of water, then another burst pounded vengefully through the wingtip. Knight clawed his way forward, snapped a gunner's safety-belt around his waist and whirled the Browning.

The muzzle of a machine-gun was blazing from the top of the submarine's forward hatch, and he could see two blue-capped heads behind it. With tracers smoking past his shoulder, he triggered a quick blast at the gunners. One of the men dropped out of sight, tilting the gun as he fell.

The Douglas hit a wave, bounced, throwing off Knight's aim. By the time the ship was in the air, two guns were blazing furiously after them from the forward and after hatches of the sub. Doyle banked around steeply to give Knight a chance for a raking fire.

"Keep climbing!" Knight shouted. "Forget the sub—there's a plane diving out of those clouds."

The approaching ship swiftly materialized into a Consolidated patrol boat, marked with Navy insignia.

"What was the number of that missing ship?" Knight yelled back at Doyle.

Before the Irishman could reply, a fierce barrage flamed from the patrol plane's guns. Knight answered with a burst aimed at the bow, then suddenly released the trigger. This might be a bona fide Navy ship, warned to be on the lookout for the stolen Douglas. But his uncertainty was quickly ended, for like some monster pouncing on its prey, the Pirate Clipper came thundering out

of the clouds, joining the Consolidated in its attack on the Douglas.

Banking swiftly, the pilot of the Consolidated tried to box the Coast Guard ship between his craft and the Clipper for a quattering crossfire. Doyle slammed the control column hard back, rolled tightly at the top of his zoom, so that Knight for an instant had a clear vertical shot down at the stolen Navy plane. The tail-gunner frantically tilted his piece, but Knight cut him down with a quick burst before he had time to fire.

Doyle's yell of exultation came through the roar of the engines. He dropped the Douglas onto the patrol plane's tail and Knight sent a battering hail of lead into the flippers. The huge Pirate Plane had attempted to match the amphibian's zoom and dive, with tracer smoking from bow and amidships. Suddenly a heavier note sounded through the din of the battle, and the Douglas shook under a new barrage. Knight swung the Browning hastily as he saw a twin .50 caliber mount spouting from the port side of the Clipper's control room.

Back of that lethal weapon he had a brief glimpse of the man called Parke. There was a savage triumph on the man's face as he jerked the .50's around for the final death-blow. Flame stabbed from the two heavy muzzles, and the starboard wing-float of the Douglas vanished in a whirl of shattered dural. The deadly torrent smoked in under the wing, tore a gaping hole through the side of the hull. There was an instant when Knight thought they were lost, though the Browning was hurling its desperate defiance at the Clipper's bridge.

The Douglas plunged down crookedly, then lifted again before Parke could follow through. With a quick little maneuver, Doyle threw the amphibian almost directly between the two pirate ships. Parke abruptly ceased fire, as his tracers shot past the hull of the Douglas and dangerously close to the other pirate ship, and in the same moment the bow and amidships guns of the patrol boat went dark.

The next second the Clipper dived and the patrol-boat started a tight chandelle—but Knight's gun was already spurting. Fragments flew from the riddled tail-group of the Consolidated, as he poured in a furious burst. Then the already riddled flippers tore off, and the pirate ship pitched headlong toward the sea. The Clipper sheered off to one side, and the crippled plane plunged into the waves. Knight took a quick glance at his ammunition belt. It was half gone—and they had been able to get only that one belt back at the island. He crawled into the cockpit.

"Get into the clouds!" he hurriedly told Doyle. "Those .50's are too long-ranged for us—and I think they were breaking out another brace of them amidships."

Doyle set the Douglas in a steep climb. "What'll we do? Get back and warn the Pirate Patrol?"

"Not yet. We haven't enough of a line on these devils. Pull up into the clouds and head West as though we were running for the coast. I'll tune in and see if I can get anything that will help us."

THE CLIPPER matched their climb, and several bursts smoked uncomfortably close to the Douglas. But the lead was too great, and in a minute the amphibian was swallowed up in the clouds. Knight switched on the receiver, which had luckily passed unscathed through both battles, and as soon as the tubes warmed up he heard a fierce *da-dit-dit* of code signals. He scribbled down the letters as fast as he could, but the code groups at first held no meaning. When the message ended he frowned at the jumble of letters a few moments, then his eyes fell on the last group. He stared incredulously at this signature combination, seized his pencil again. Two minutes later, while Doyle held the amphibian in a wide circle in the clouds, Knight climbed into the other seat.

"Lothario, we've stumbled on something," he said tautly. "Do you remember Fritz Schleiger?"

"Do I remember that rat!" Doyle exploded. "I celebrated by gettin' drunk when I heard that Nazi devil had been killed."

"He wasn't killed," Knight said in a grim voice. "That story of the explosion at Kiel either was a lie or else he was only injured. He's still in the naval intelligence section of the Gestapo—and apparently skipped away from his superiors to run things his own way."

"You mean that message is in Nazi code?" said Doyle, astonished.

"The same naval cipher that Schleiger used when we trailed him in Havana. And here's his code signature. This message was to RQ-5 and it says to be ready to scramble any but Nazi messages from this area to any shore, Navy, or Coast Guard operators. Particularly 'Messages from Agents Knight and Doyle.'"

"Phew!" said the Irishman. "Dick, does this mean th' Nazis are back of that damned pirate business?"

"Hardly," replied Knight. "They have enough things to handle in Europe. But what I do think it means is that Schleiger, with all his power, has gone off on a tack of his own. He commands the men and ships to do it. And he's set—until the higher-ups get full wind of it. But by that time, it may be too late. Incidentally, you saw that the sub had no identification markings, and probably if any well-known Nazis are linked with the scheme they've probably had their features altered like Schleiger's."

"Holy mackerel!" erupted Doyle. "Then th' bird we ran into last night—"

"Is Fritz Schleiger. Maybe he *was* in an explosion, and had to have a plastic surgery job done on his face—but it was too neat a change. I'll wager the whole thing was planned so whatever they're up to can't be traced back to any official source."

"We'd better get ashore and tip off Brett," Doyle said anxiously. "It looks bad."

"Ease down and take a peek first," said Knight.

Doyle cautiously nosed down. In a moment or two they could see through the thinning mists down to the freighter and the submarine, now alongside. There was no sign of the Clipper.

"Drop a little lower, so they'll see us," directed Knight. "I'll get back on the set. I want to see if they'll call Schleiger."

HE HAD HARDLY switched on the receiver when a dull explosion nearby slightly rocked the Douglas. Doyle zoomed hastily. "Th' squareheads saw us, all right! They broke out an A-A gun on the sub."

"Keep zigzagging," exclaimed Knight. "They may have an automatic director on that gun."

Signals suddenly rattled into the earphones, and from their volume he knew they were from the freighter or the sub:

"Douglas still circling us. Shall we remain to protect supply ship or return to RQ-5?"

After a few seconds, the answer came in the same code:

"Remain until sure Douglas downed or gone. Advise agents ashore if Knight gets away and starts for coast. Also notify me. Am proceeding direct to RQ-5."

—Schleiger."

Knight eagerly scrutinized the bearing-indicator, checked it against the course of the Douglas.

"Head her on 172," he said to Doyle.

The Irishman peered at a Coast



Guard map. "There's nothin' down that way, Dick."

"You're wrong. There's something called RQ-5. I thought that was an agent's designation at first, but it must be another ship. If the Clipper headed straight for it when she left here, then that bearing will take us there, too."

Doyle flew by instruments for ten minutes, glanced across at Knight. "We better sneak down for another look. You got any idea how far this RQ-5 is?"

"Not the slightest. But we're out of sight of the sub by now. Here, I'll take over."

Knight warily brought the Douglas down to where they could get a

faint glimpse of the sea, though the lower part of the cloud almost hid the ship. Increasing masses of seaweed showed on the waters. There was no vessel in sight, nor any trace of the Clipper. Knight climbed a hundred feet, and at ten-minute intervals dipped for a brief inspection of the gray wastes below. As he nosed down for the third scrutiny both he and Doyle sat up, startled. Instead of the ocean, there now seemed to be a vast gray desert below, extending to the horizon in an awe-inspiring desolation, except where a blur some miles ahead indicated what might be taken for a village.

"Hell's bells!" said Doyle. "The map must be wrong."

"That's not land," Knight said tensely. "It must be the Sargasso Sea—the 'dead spot' of the ocean. That stuff is seaweed—people used to think vessels got caught in the Sargasso when—"

The words died on his lips, for the blur had materialized into a tangle of masts and rigging, a maze of derelict vessels held prisoner in that strange gray desert.

"Good Lord!" he shouted. "Doyle, the stories were right. We've found the port of missing ships!"

CHAPTER IV

SECRET OF THE SARGASSO

DOYLE snatched up the glasses, focussed them on the derelict vessels. A dazed look came into his face, and he shoved the glasses across at Knight.

"Look—over there to the right."

A queer fascination gripped Knight as he saw a long, rusty hull—the hull of a huge naval collier.

"The Cyclops! Still afloat after all these years!"

On past the lost Navy ship the black hull of an old four-master lay rotting amidst the seaweed, and heeled partly over against it was an ancient frigate dating back at least to Revolutionary times. Two hundred yards away, across an oddly clear stretch of water, a fire-scorched tanker lay motionless like the rest. Beyond, and on both sides of that queerly cleared lane, Knight saw at least three score of ships, and tangled between them and in the maze of seaweed was the moldy wreckage of other craft, now unrecognizable. Timbers, spars, and parts of broken masts made an almost unending background for a mile around.

In that first fascinating glimpse of this graveyard of ships, Knight failed to notice a long, cigar-shaped hull moving slowly past the derelict tanker. Suddenly the motion caught his eyes, and with astonishment he saw the first of five huge submarines at the side of the cleared lane. They looked like sister ships to the one which had almost trapped the Douglas, but Knight had only an instant to notice, for a yell from Doyle made him whirl in his seat. Another Coast

Guard amphibian with a pirate emblem on the bow was nosing down steeply from the clouds. Knight opened the engines full out.

"Shall I get on th' gun?" howled Doyle.

"Yes, but don't fire till you have to!" rapped Knight. "We've only two good bursts left. I'll try to run for it."

He zoomed to regain the altitude he had lost while gliding over the derelicts. The secret was suddenly clear, and if they could only escape now it would be easy to wreck Schleiger's plans. But that hope died a swift death, for he was still two hundred feet from the clouds when without warning the Pirate Clipper dived into view and hurtled across at the Douglas.

Simultaneously, both pirate ships opened fire. Knight shoved the controls forward, and the crackling tracers met above the amphibian's engines. Instantly both streams dipped, and with a roar one prop went to pieces. Before Doyle could swing the Browning, a twin .50 from the bow of the Clipper hammered another blast into the overhead engines, and flame gushed out. Knight had already cut the switch of the crippled engine, and as the other one burst into flames he cut off the main fuel valve.

There was no chance left for escape; they would be lucky to get down alive. Knight slipped the Douglas away from the blaze, while he hastily picked a place to land. The Douglas moaned down across the stern of the *Cyclops* and into the cleared lane. Hissing along on the step, it sped toward the side of the four-master. Knight waited until the last second, dug the port wingtip pontoon deeply into the water. The Douglas came to a jolting stop, the pontoon wrenched half off, and the riddled starboard wing thudded into the side of the old square-rigger.

"Get up on the wing and take the gun when I hand it up," Knight said hastily. He scrambled into the bow, dismounted the Browning and lifted it up to the Irishman. A few seconds later they climbed onto the deck of the four-master.

"There's some men on th' *Cyclops* watchin' us," panted Doyle, "an' one of th' subs is comin' this way."

"Get around on the other side," muttered Knight. "I saw some kind of gangway to that old sloop astern. If we can make one of those other ships without anybody seeing us, we'll have time to figure out the next move."

"A lot of good it'll do," Doyle said bitterly. "If there was any way out of this hellhole, do you think th' poor devils who got stuck here wouldn't have found it?"

"There are still two planes," Knight answered. "I'll admit it's a slim chance, but after dark we might be able to reach that other Douglas."

"Th' Clipper's landin' now," said Doyle, peering around a tangle of rotted rigging which had collapsed around the mainmast.

"Ahoy there," a voice said hoarsely from behind them. Knight whirled, saw a withered, white-haired old man hobbling across the makeshift gangway to the sloop. There was a pathetic eagerness in his faded blue eyes as he hurried up to them.

"You're friends—I saw you fight with those fiends! Is there—is there help coming?"

Knight looked at the ragged figure a moment, slowly shook his head. "We didn't know this place was here—we just found it by accident."

"Then there's still a chance," the old man quavered. "Jackson may have dropped the message—there's still a chance!"

The initials on the arm of the dead C.P.O. flashed into Knight's memory. "I'm sorry, old fellow," he said gently, "but Jackson was killed—and the part of his message that gave the *Cyclops*' position was lost."

The light went out of the old man's eyes. "Twenty-one years," he whispered, "twenty-one years, living on hope—thinking some day we'd get out of this God-forsaken hole."

"The sub's gettin' in range," Doyle broke in anxiously, "and they're luggin' a machine-gun up on her deck."

"Come with me," the old man said dully, "I can hide you—and starvin'g's better than falling into their hands."

Knight and Doyle followed him across the shaky gangway, onto the sloop, and down another precarious walk-way into the dark hull of an old tramp steamer. A clatter of machine-gun fire echoed behind them, and bits of rotted wood flew from the sides of the four-master.

"They think you're still on there," cackled the old man. "Let them waste their ammunition—we'll be safe here a while, and if they start to get closer, it's easy enough to get to another ship. There's a way of getting to every one of these old hulks—in twenty-one years you've plenty of time to see to that."

"Then you were on the *Cyclops*, too?" said Knight.

"Chief boatswain's mate, Pete Masters," the old man answered. "Seems queer, introducing yourself to some one, after all that time—"

"Look," Knight said hurriedly, "there is a chance for us, after all. But you'll have to help us—tell us as much as you can about these pirates and this place."

"They're not pirates," said Masters harshly. "That's only to cover up the truth. They're building up a secret submarine and aeroplane base where they can hide and refuel when war comes."

"I suspected that when I saw the subs," Knight said. "You know what country they belong to?"

Masters nodded wearily. "I'm pretty sure they're German, but you couldn't prove it. They don't wear any uniforms, and the subs don't carry markings."

Knight stole a cautious glance from one of the rusty portholes. The

Clipper and the stolen Coast Guard ship were being maneuvered to floats placed near the *Cyclops*.

"They must be using her for their headquarters," he said to Masters.

"Yes, they took her over," he said in a bitter voice. "There's a murderer named Schleiger in command, and he killed all but Jackson and me. When the first plane flew over here, we thought we were saved. There were seventeen of us—five from the *Cyclops* and the rest from the other ships that got caught in the Sargasso the same as we did."

"When was this first plane you're talkin' about?" demanded Doyle.

"Ten months ago," said Masters. "We'd been praying for years it would happen—we knew planes must've been developed a lot in all the years, and maybe they'd be flying across the ocean. That's what this was, we learned later, a plane trying out a new route. They circled around for a long time, and then flew away. A month later, three more came and dropped bombs to clear a place for landing. It wasn't enough, and later they came back, and after the bombs they sprayed some kind of chemicals to kill the seaweed growth. They sank eleven old ships before they got it clear, then they landed."

"We still thought they were coming to take us out of here—but Schleiger soon showed us different. They made us slave, do all the hard work, and tell them what ships had supplies on them, and if there was any wireless sets. That was a laugh," Masters added grimly. "We'd been trying for years to get a message out of here, but none of us knew anything about wireless, and the *Cyclops* set—the only one here—had been wrecked by the spies."

"Spies?" said Knight. "You mean spies crippled the *Cyclops*?"

"They poisoned everyone on board but nine of us," Masters replied savagely. "It was done by spies in all but the captain's mess. The stuff didn't work for two hours after mess that night, so there wasn't any warning even for those on the dog-watch that ate later. Just those of us on the bridge—and the captain—escaped. By the time we were ready to eat there was plenty of trouble, men passing out on all sides. The captain figured out what had happened, and we got some guns. The spies shot the officers before we finished them, and there we were with the wireless dead, steam dying in the boiler, and not enough of us left to handle the ship, even if we'd known how."

"WE GOT the truth out of one of the spies before he died—a U-boat was supposed to meet the ship and put a skeleton crew aboard, then turn her into a German raider. But the U-boat must've been sunk. It never showed up, and we drifted for a month without sighting a soul. Then the current washed us into the Sargasso weed, and after two months more we ended up here. There was plenty of food aboard and we made

water with a still after the supply from the evaporators gave out. There were men here that'd been in the Sargasso over thirty years, living on food from ships that got washed in like us, and sometimes fish—"

"It must have been a terrible experience," Knight said quickly, as he saw an absent look come into Masters' eyes. "But we'll have to think about this other problem now. There must be some way of getting through the seaweed, or those subs wouldn't be here. If we can get word to the Navy—"

"The subs come through under the stuff, for the last fifty miles," interrupted the old man. "It's too tight-packed, and their screws would foul. Jackson heard them talking—he understood German. They set up a special wireless on the *Cyclops* to guide the subs here, and when they get a certain signal they know they've got clear water above. They've brought in supplies and fuel oil—they're using the old tanker for storing the gas; I guess seeing that's what gave them the idea. If war comes they'll have a secret base they can operate from and sink American ships, with the planes spotting for them, most likely, and what the subs don't get the planes will."

"But what's th' idea of this pirate business?" queried Doyle.

"A freighter crew saw them attack a plane, Jackson heard Schleiger say. They were afraid the Navy would suspect they were building up a war-base, so they made up the pirate idea to lead everyone off the track. They robbed a ship of some gold—Schleiger said they might as well make a profit out of it while they were at it. That was when Jackson got the idea for stowing away on board the big plane and dropping a message for help. He heard Schleiger say they'd put on a show over Miami, with bodies hanging from the wings to make it look like the old bloodthirsty pirates, and then fly in high over the Everglades and glide back with their motors throttled down, so everybody'd think the pirate base was somewhere in there.

"They also killed two men from the tanker—I jumped overboard and made them think I was drowned, or they'd probably have got me. If I'd known how it was going to end, I'd have stayed below decks—maybe I'd have had nerve enough to blow myself up with the ashcans as long as those murderers went with me."

"Th' what?" said Doyle.

"That was the wartime name for—" Masters suddenly jerked Doyle's arm. "Keep away from that porthole! They've got two boats from the subs starting around the four-master, and they both have guns mounted in their bows."

"We'd better get further away," said Knight. "How close to the *Cyclops* can you get us, that is, if we wait till dark for the last part?"

"I could even get you on board," Masters said shakily. "There's an old schooner near the stern, and if the

rigging hasn't gone clear rotten you could climb up and swing over from the foremast. But it'd be madness to board that hell-ship."

"I don't want to get aboard—just close enough for a try at one of those planes."

"It means hanging if they catch you," the old man said hoarsely. "But I'm willing to take the risk."

He led the way to the starboard quarter, across a broken mast which bridged the evil-smelling water between the tramp steamer and an old fishing-boat. Moving furtively, sometimes crawling along rusty deck-plates or blackened timbers and dragging the Browning between them, they worked their way through



the derelict fleet until they were within two hundred yards of the *Cyclops*.

"Can't go any closer till dark," Masters said, breathlessly, as they hid behind the deckhouse of a frowsy old English yacht. "Won't be long—it's dusk now."

Knight cautiously peered around the side of the deck-house. The two boat-crews were half a mile distant, apparently still searching. On the other side, men in dungaree trousers were refueling the Clipper and the amphibian while others gingerly transferred bombs from one of the submarines to the cargo hatch of the Clipper. Though the men appeared to be in no hurry, they were obviously preparing for a raid of some kind.

The afterglow died, and Knight was about to signal for the last stage of their perilous trip when from somewhere near the stern of the *Cyclops* a stentorian yell rang out.

"Herr Schleiger! I see them—they are hiding on the old British yacht!"

CHAPTER V

A MATTER OF ASH-CANS

MASTERS gave a frightened cry. "Heaven forgive me! I forgot they could see from the old schooner mast!"

"Never mind that now!" grated Knight. He snatched up the Browning. "We've got to clear the float by the Douglas—be ready to swim for it, both of you!"

One of the submarines gave a shrill blast of its siren, and a moment later a searchlight flickered. Knight leaped to the edge of the deckhouse, lifted the heavy machine-gun. Simultaneously flame jetted from the shadows up on the *Cyclops*' deck, and a hail of slugs gouged through the deckhouse back of Knight. He triggered a brief burst, and the gunner fell. A German in the Douglas sprang frantically for the twin-fifties mounted in the bow. Knight cut him

down swiftly, whirled the Browning and emptied the gun at the men on the float.

"Get going!" he rasped at Doyle and Masters. "I've just one burst left."

The petty officer plunged into the water, but Doyle sprang toward Knight.

"If you think I'm leavin' you here—"

Knight gave him a shove. As the Irishman struck the water, Knight raised the empty Browning as though for a blast at the men on the nearest sub. Another man leaped to the gun up on the *Cyclops*' deck, and tracers blazed past Knight's head.

"Alive, *Dumkopf!*" a fierce voice bellowed, and the gun went silent. "Spot them with that light—get a boat out there!"

Knight dropped the Browning and dived in, swimming at top speed. A bright light suddenly caught him, and as he floundered out of its blinding rays he saw men running along the float, armed with pistols. Doyle was climbing up the side of the Douglas, but before he could reach the cockpit two of the Germans were on him. A boat darted out from one of the submarines, and Masters and he were dragged aboard. Within another minute the three Americans stood dripping on the old collier's deck, surrounded by a dozen armed men.

Schleiger pushed his way through, a malevolent smile on his altered face. But back of that mirthless expression Knight could tell he was worried.

"So this time, Herr Knight, you decide to drop in on me," Schleiger said with a ponderous humor. "Allow me to greet you—"

"Fritz what are we wasting time for?" one of the sub commanders broke in curtly. "Shoot these meddlers and let us get about our business."

"*Dummer Ochs!*" Schleiger said in a furious undertone. "Another interference from you, and one of your juniors will get a promotion."

Then, more audibly, he said, "It is obvious you do not understand, Herr von Garitz. These two who flew the Douglas are the same as a key to the secret files of all United States naval and military intelligence. The tall one is Richard Knight, the one they used to call 'Q.' He has had access to every government department in Washington. And that ugly *Hund* with the crooked nose is Doyle, his assistant."

"You told me Knight was being hunted by his own government, for treason," growled von Garitz.

"It's quite evident that was a fabrication, meant to trick our espionage," Schleiger turned his deep-set eyes on Knight. "You have a good imagination—perhaps a little use of it will cause you to talk freely, without the persuasion my men are ready to offer."

"You'll know the truth soon enough," Knight muttered. If he

could scare these men into action and at the same time get below decks. . . .

"I've no time to waste on you!" Schleiger said sharply. "I'll give you ten seconds to talk!"

"Take your ten seconds and go to the devil," said Knight.

"You insolent swine!" Schleiger struck him fiercely in the mouth, and a second blow sent Knight reeling back against the two men who held him. It was no effort to let his anger rise to a show of sudden fury.

"Damn you, Schleiger!" he snarled. "You'll pay for that! The *Saratoga's* within two hundred miles of this hellhole—and by morning you and these rats will be dead!"

SCHLEIGER paled, and von Garitz burst into a fierce tirade. "See what you've done! I told you it was no accident—they got here ahead of the Clipper, so they couldn't have followed it. Now we're lost and the whole plan—"

"Silence!" roared Schleiger. "We're not beaten yet. The *Saratoga* was at Norfolk two days ago, and we can figure her course close enough to find her. We'll blow the *verdammt* ship out of the water before she can get her planes off."

"But they'll hear us coming," interposed a frightened pilot.

"We'll make a quiet approach, from the ceiling," rasped Schleiger.

"Wait," cut in von Garitz. "What if this *Teufel* is trying to lead us into a trap?"

Knight's heart stood still. Schleiger glared at the submarine officer. "What kind of trap?"

"The *Saratoga* may already have her planes in the air, searching for the Clipper."

Schleiger laughed scornfully, and the weight left Knight's heart. They still believed his hasty lie.

"Searching at night—with clouds down to 3,000 feet?" said the German, "Not a chance." He wheeled to the assembled men. "Start the motors of both planes. Von Garitz, have your submarine commanders prepare to get underway. When we sink the *Saratoga* it will bring every naval vessel they have in the Atlantic, searching for her. It is too good a chance to miss. We'll destroy their Atlantic squadron and leave the entire coast unprotected. They won't be looking for submarines."

"What of the prisoners, *Herr* Schleiger?" said one of the Germans.

"Shoot that old buzzard, and take the others below to the brig," snapped the leader. "No—wait a moment. They may have told him something important—put him with them, too."

A pockmarked Nazi switched on a flashlight and gave Masters a shove toward the nearest companionway. Two others jammed their pistols against Knight and the Irishman. As Masters stumbled down to the next deck, Knight thought swiftly for a moment. There was a chance it might

work, if one of these men understood enough English. . . .

"Masters!" he said hoarsely. "Whatever you do, don't tell them about the jewels you hid in the sick-bay."

The man guarding him swore at him in German, but the one covering Doyle jerked to a halt. "What iss dot?" he demanded. "What iss it you say about jewels?"

Knight looked dismayed. "Nothing," he mumbled. "You misunderstood me—"

"Speak German," said the man harshly. "I heard you speak it with *Herr* Schleiger. The English I also know a little—and you will tell what you mean by hidden jewels."

Doyle and Masters were listening tensely, their eyes on Knight. He looked anxiously over his shoulder toward the companionway that led into the gloomy compartment.

"*Kameraden*," he whispered, "I can show you how to be rich—more than you will ever be, risking your lives for Schleiger and the others. If you help us to escape—"

"*Himmel!*" said Masters' guard. "Keep that *Schweinhund* quiet. If Schleiger were to hear him—"

"They can't hear," muttered Doyle's guard. He gave the other man a significant look. "There is no harm in finding out what they will give."

Knight glanced quickly at Masters. "The bottles in the sick-bay medicine closet—you did not move them?"

The old man hesitated, obviously floundering for the right answer.

"Only—a few," he said at last.

"And the rest of the jewels—they are still hidden in the ash-can?"

Masters started, and a frightened light came into his eyes. "Yes—still there," he stammered.

Knight turned to the German who knew a smattering of English. The man's heavy face was a picture of greed.

"The petty officer and his shipmates found a chest of jewels on one of the *dérelicts*. Most of the stones are hidden in the sickbay—the rest I can force the old man to get. They are all yours—if you help us get away. We can help you escape, too—"

"Show us the jewels," one of the men said thickly. His face was flushed as with fever, and Knight could almost tell his seething thoughts. The three of them would take the stones, kill the prisoners on the pretext of attempted escape, and divide the jewels secretly.

Through the steel sides of the *Cyclops*, the rumble of radial engines was suddenly audible. Knight silently groaned. In another five minutes they would be too late.

"Go ahead—the sick-bay," he flung at Masters. The petty officer stumbled forward, his guard close on his heels, and the other Nazis hurriedly followed with Knight and Doyle. In spite of their aroused cupidity, there was no evidence of relaxed precautions; Knight still felt the hard prod of a pistol in his side. When they

reached the sick-bay, Masters' guard eagerly swung his flashlight around the cubby which served as the medicine closet. Row after row of bottles stood on the dusty shelves, their labels yellowed with age.

"Which ones?" snapped the Nazi who spoke English. He gripped the petty officer's arm. "Speak up, you old fool!"

"The—the ones on the middle—that third shelf," faltered Masters, but Knight broke in angrily.

"This is no time to lie! Our lives are worth more than any treasure." He stepped toward the shelves, raised a shaking hand. "I'll show you—they told me where they are."

THE GREEDY FACES of the three guards made an ugly picture in the light as he picked out a bottle made of dark glass. His left hand was over the label before they had time to read it. Gripping the bottle tightly, he twisted off the cap, turned around.

"Here," he said tautly. He turned as though to hand over the bottle, then swiftly jerked his arm. The acrid fumes of ammonia filled the compartment, and two of the Germans tottered back, howling and clawing at their eyes. Doyle lunged against the third guard, but he was a second too late. A shot blazed from the man's pistol as he hit the deck, and Masters slowly fell to his knees.

Knight leaped across the cubby, smashed the bottle down on the head of the man who had guarded him. The German crashed against the bulkhead, dropped limply. The other man was swaying on his feet, gasping for breath through the ammonia fumes. Knight drove a hook to his chin, then dropped him with a terrific uppercut.

Doyle got to his feet, one of the pistols held butt-foremost. The third German lay motionless on the deck. Knight knelt beside Masters, and the old petty officer smiled up feebly.

"Fast—thinking," he said huskily. "Better—not wait—"

"You're goin' to be all right, old-timer," Doyle broke in. "We'll get you fixed up in a jiffy—"

"No, I'm through, lad. But I won't mind—if you—get Schleiger." Masters' faded blue eyes shifted to Knight. "The ash-cans—you meant the old depth-bombs we had in the war—"

Knight nodded, a roar of motors outside drowning his attempt at speech. Masters waited until the engines were idling again.

"Ten of them—hid under the bunks—old C.P.O. quarters." Masters' ashen face had the ghost of a smile. "We used the officers' quarters—I hid the bombs—afraid one of the boys might go crazy and think we were better off dead—"

Another loud roar of revving-up engines cut him short, and when it ended the old petty officer's eyes were glazed. Knight stood up, a hard lump in his throat.

"Come on," he said to Doyle. "All

we can do for him now is try to square things with Schleiger."

The Clipper's engines were still revving up when they reached the C.P.O. quarters. Panting, they ran forward, carrying one of the depth-bombs. Near the bow, just opposite the brig, was a port-hole large enough for their purpose. Knight pulled the safety pin, and the trip-gear clicked as the bomb went through the port-hole. Whirling, they ran aft as fast as they could. Before they had gone sixty feet there was a deafening blast, and the *Cyclops* shuddered. Knight picked himself up from the deck, saw Doyle drunkenly starting forward. He ran after the Irishman, and through a gaping hole in the port bow he saw what the bomb had done.

Wedging between the *Cyclops* and the old schooner, as he had intended, it had torn open the collier's hull and almost wrecked the schooner. Flames were spreading through the splintered debris that remained above the water. Down on the float where the Douglas was moored, two men were running to cast off the lines before the blaze reached the plane. The Clipper was already taxiing out to take off.

"The schooner's mast!" Doyle yelled. "It's tilting against the *Cyclops*—if we can make it—"

"We've got to!" rasped Knight. He jammed one of the Germans' pistols into his belt, swung out through the hole and leaped. The rigging broke, let him drop twenty feet before it held his weight. He scrambled down to the deck, as Doyle jumped and raced along one of Masters' improvised gangways onto the float. One of the Germans saw him, snatched frantically at his gun.

Knight got him with a bullet almost squarely between the eyes, and the second German, unarmed, dived madly into the water. The pilot threw open the starboard window of the cockpit, pumped two wild shots at Knight. Doyle's pistol roared just as Knight aimed, and the pilot crumpled out of sight. In a split-second, Knight cast off the last line, jumped aboard. By the time Doyle reached the cockpit, he had hoisted the dead pilot over the side and was at the controls.

"Get on those fifties in the bow!" he said tensely. "Look out—that first

sub! It's trying to head us off!"

THE T-T-T-T-T-T-T of a machine-gun came faintly through the din of the engines. Doyle flung himself onto the heavy twin-mount, whirled it toward the submarine. With tracers lacing the air and bullets spattering the water on both sides, Knight sent the Douglas thundering out from the float. The Clipper was in the air, in a climbing turn, and he knew what was coming.

As the Douglas went onto the step, he threw the transmitter switch and seized the radio-mike pronged beside him.

"Calling Navy—Coast Guard—Pirate Patrol!" he shouted. "Have located pirate base—longitude one hundred and—"

T-t-t-t-t-t-t-t! A hail of slugs gouged through the top of the cabin. The green light by the microphone prongs went out, and Knight knew the circuit was dead. He zoomed into the air, banked with the wingtip almost in the water. Doyle was crouching, almost hidden, the twin-guns pointed up steeply, and suddenly out of the gloom Knight saw the huge Pirate Clipper plunging at them.

Two bright lines flung down from the Clipper's bow, straight for the banking Douglas. Knight swept the controls back, hurled the ship into a fierce chandelle. The vast hull of the Clipper seemed to whirl down at them, abruptly hiding the amphibian from the gunner in the bow. And in that fateful instant Doyle's tracers struck deep in the monster's belly.

Two jets of fire puffed out, to right and left of the Clipper. Knight kicked out from under the stricken ship, and as the Douglas raced past he saw the fire sweep forward into the Clipper's cabin. The tortured face of Fritz Schleiger showed for a moment back of the windshield. Then it was lost in the flames, and there was only the hideous skull-and-crossbones emblem on the bow remaining to be seen.

A few seconds later, a tremendous explosion shook the sky as the Clipper's bombs went off, and when the glare faded there was no sign of the Pirate Plane.

"Unload your eggs!" Knight shouted at Doyle. "I'll try to get over the subs!"

He swung back, swiftly zigzagging to throw off the gunners. One burst went through the wing, then the Douglas jumped as Doyle pulled the bomb release. Below, the bow of a submarine pitched up into view as the first bomb struck close by. Then a blinding glare spread over the water.

"Good boy!" Knight yelled. "You hit the tanker!"

Flaming gasoline spread between the derelicts to the subs wildly trying to escape. One of the undersea boats rammed headlong into another, and a third piled blindly into the side of the *Cyclops*. Knight took one last look at the holocaust, climbed the plane and headed into the west.

"There's the end of the secret base—and most of Schleiger's 'pirate' mob. One or two of the subs may escape under the seaweed, but they'll never try it again."

"We've got one guy to thank for it," said Doyle, "aside from your usin' your bean in th' right spots."

"Poor old Masters," said Knight. "He and the others of the *Cyclops* were fighters that time forgot. And after twenty-one years, the War over—Masters died in the service of his country! Doyle, I want you to see that he gets a monument in Arlington—tell Naval Intelligence the whole thing, except my being in on it."

"I'll see to it, Dick," replied the Irishman. "And if he's got any kin alive, I'll make sure they know and are taken care of."

"Thanks, Lothario," Knight said. He was silent for a while, as the Douglas droned along in the darkness, with the glow of the burning derelicts fading astern, then he spoke again. "We'd better land this ship on some lonely stretch of beach; it would be awkward explaining that pirate emblem on our bow. I know a spot between Miami and Palm Beach. We'll leave the ship for the Coast Guard to find, and you can go into Miami and phone General Brett."

"Yeah, that's right," said Doyle. "I'll have to report, and there's some more official business I'd better tend to."

Knight looked at him sidewise, grinned.

"Since when," he said, "has a red-head been classed as official business?"

"I Flipped Myself Dizzy—For a Record!"

(Continued from page 8)

yank the stick clear back into my stomach. This action would flop the ship over for the loop.

But it was difficult to make the glider do a clean one as she would shoot up and hang on her back every time. And then while she was hanging there, I would have to glance at the wing tips, before the smoke got in my eyes, to see what relation they were with the horizon. At times the smoke was so thick I thought I was in a London fog.

I was directly over the Fair grounds and now at only 4,000 feet. Groggy as all get-out, I was worried as to whether I'd be capable of landing the ship without cracking it up. It seemed as though I must have made 300 loops I was so completely tipsy. The smoke bomb went out now, and I took notice of the fact that the whole under side of the wing was burnt full of holes, some of which were as large as those good old U. S. silver "cartwheel" dollars!

NOW being at 2,500 feet and directly over the administration building of the exposition, I decided to cease my looping and return to the airport. At this stage of the game, I didn't feel any too well and realized I had best collect my senses before landing. So doing three vertical banks over the administration building to signal the officials that I had completed my looping, I high-tailed it towards the airport.

As I glided out over the center of

the city of San Diego, my proper sense of balance returned. But my whole body now started to heat up as though I was on fire, I began to perspire, and I could feel the blood pulsing in my veins. My heart was pumping like mad. This was caused by the violent change in temperatures. Glancing at my hands, I knew they were frost bitten, since they were unearthly red, except for a number of brown spots in the palms where the freezing metal of the stick had stung them. My nose felt like a sizzling tomato—and I'll bet it resembled one.

By circling back and forth over the west side of town, I lost more altitude. But I was still too high to make my approach for a landing at Lindbergh Field, so I wheeled out over the bay and made a figure eight just above some tuna boats. As I

dropped to about 150 feet over them, I pulled up into a vertical slip and slid down past one of the fish-loaded craft. I could smell the fresh fish. Well, after trying to breathe at 16,000 feet and choking on the acrid smoke of that bomb for the past hour, even that fishy smell was like sweet perfume!

Now I swung over to the airport, and if I do say it myself I brought the bus in nicely. Before the glider stopped rolling, a crowd started milling around, and a chatter of voices was calling out to me that I'd done anywhere from 25 to 125 loops. To find out how many I'd really done, I'd have to get Mr. Van Dusen's official check.

When I set about crawling out of the cockpit, my good friend Volmer Jensen had to help me. My hands were so stiff I couldn't unfasten the

safety belt. Vol next went to work stripping my monkey suit off me, and during this procedure I realized how tired I was. My hands hurt more than ever now, for with the blood rushing back into them, they felt as though a million needles were pricking them.

Then Briegleb came running over and broke the news. I'd turned 54 loops!

That wasn't the end of the matter, either. For the next thing I knew the Fair officials were after me to tow-glide the photos and news story of the record to Los Angeles. And right away!

After what I'd just been through? With me *half* dead—and my hands *all* dead? Did they think for a minute that I— Well, they must have thought so. And now they're sure of it—for danged if I didn't do it!

But that's another story.

They Solved Their Puzzles With Planes

(Continued from page 15)

as it cruised back to Michigan.

Air speed had enabled the cool heads of labor and capital to keep thousands of men at work, not to mention the many others who would have lost pay checks in closed stores and in other shops if that strike had really got going for more than it was worth.

NOW MAYBE it seems silly to think of air speed as helping to change mother's and sister's batty-looking hats and cute little dress styles. But when you remember that women's clothes factories keep over 300,000 families in eats in New York City alone, the subject becomes more serious.

The truth is that when the dear little ladies get sick of a style, they quit it like hitting it with an axe. Today, then, business may be on the up with sewing machines sizzling; but tomorrow the business may simply just be ain't!

When that happens, Hollywood has to get busy, for the movies help put over styles. New York also has to be ready—to make whatever is to replace the dead style. And Paris is in on it, too. For the sweeties generally demand that that magic city do most of their original designing.

So what to do? Why, it's just a matter of having a Hollywood stylist get on a plane and fly to New York, then grab the P.A.A. Clipper for England, and finally board an Imperial Airways job for Paris. Later, our stylist hurtles back the same way, the motion pictures are made in jig time (by flying film cans from "location" to the studio for development and finishing) and lastly the style film is airplaned out to the theatres. There, the daughters of Eve get all enthused about how they could look just too, too darling in that chic little number that Hedy Lamarr is swishing all over the screen.

Meantime, New York has shipped the finished garments to stores all

over the country—and the girls will be at the counters in droves the morning after the film is shown.

As a result, Mr. I.M.A. Garmentworker's sewing machine will keep whizzing, and the Garmentworker's family will have their porridge as usual. For air speed will have saved hundreds of thousands of job layoffs in the factories and stores which depend upon women's clothes.

Shifting from the whimsies of ladies to the wackiness of men, let's now see what air speed does for inventors:

All inventors are screwy. Well, maybe not *all* of them, but anyhow the hundred odd I have met have been. You can blame their screwiness on the nervestrain they suffer in waiting for data or for materials when they are chasing the bugs out of their inventions.

An invention will be all finished—excepting that it goes "*clank*" when it ought to go "*clunk*." Or that static electricity makes some of its parts stick so the inventor is stuck. Or that it squirts oils like a high pressure fire hose and blackens up the faces of its operators until they are all made-up to warble "*Mammy*." Yes, I have seen all those things and dozens more happen to slap-happy inventors.

In the old days, such happenings often meant weeks or even months of delays while waiting for answers to letters, or while tediously working out new wrinkles. But now the inventors just climb aboard planes and quickly go flying off to research laboratories at factories all over the country, or they just have new parts and materials shipped in by air express. This way, the bugs get scattered out of the inventions so fast they make friction-squeals as they beat it.

That is why the patent office is currently so busy. And don't forget, nearly every new invention means new jobs. Here, air speed helps new factories to get started as well as

solving the problems of old ones.

IN Colorado, a big power plant was in trouble. But the engineer specialist who knew most about that trouble was busy solving some bigger trouble in Kentucky. He could leave Kentucky for three days, all right. But not for longer. So, what to do?

Sure, air speed was the answer! It fetched him out to Colorado—and still got him back in plenty of time for him to keep playing his hand in Kentucky. The mountain state riddle was simply a side-bet proposition.

But in solving the problem out there, he found that the machinery in question was overloaded. A new factory must be quickly equipped.

Back in Kentucky, he telegraphed the makers of the machines needed. They made a date to meet in Colorado. And all of them traveled by air, for none could spare the time to go any other way.

After they had gone over the problem, of course, they had to go home and do some serious planning. But more dates to travel by air to convenient meeting places soon got them together again to match things up. And in short order the new plant was buzzing away.

There's the matter of rectifying mistakes, too. In an airplane engine factory, some crackpot clerk had been day dreaming of last night's clambake—when he mistook the tabasco sauce for a drink of grape juice—and as a result, he hadn't ordered enough wrist pins of an odd size. His error threatened to hold up the assembly line.

What was the answer? Why, they simply phoned the distant factory which makes the pins and had them sent in by air. That kept the line going and the men at work.

Anyhow, sky fans, we'd say there's scarcely a commercial plane flying over your head which is not solving somebody's problem. In its express compartment, one airliner may have

a gear for a dredge that is broken down 'way out in Hawaii—alongside some exotic flowers which will enable some portly banker to induce his

wife to quit bawling him out and let him have one night a week off with the boys.

Yes, the airplane spells romance,

excitement, and adventure — and cracks all manner of puzzles, to boot — puzzles which couldn't have been licked before men had wings.

Again—The Nationals!

(Continued from page 42)

words, Toft's time of 12:45 gave him first place, and so on down the line.

Then these fellows—the Team was composed of seven lads—competed with the Canadian boys. But in this contest the top man in the eliminations didn't follow through. Instead, Ed Naudzius, who was only fifth on the American Team, had much better luck and copped first.

Get it now, lads? Simple, isn't it?

A manufacturers' meeting was held in the ballroom of the Hotel Fort Shelby. The affair was underwritten by Eddie Roberts, sole sponsor of last year's original party, and Erwin Ohlsson, of the Ohlsson Miniatures Company. To this meeting were invited manufacturers, dealers, jobbers, and a special effort assured a swell social time as well as a more complete understanding of the problems confronting each phase of the industry.

CREDIT where credit is due as follows: Art Vhay, Contest Director, whose legal mind was capable of classifying any situation; Steve Corbett, who disposed of the limited supply of box lunches in as humanly and tolerant a manner as was possible; Sam Block, our hard-working Eastern representative and chief exponent of Horace Greeley; Clifford W. Rogers, President, Syncro Devices, Inc., and a member of the Aviation Committee of the Metropolitan Council of Exchange Clubs, who provided the official program booklet of rules; Irwin Polk, who once again worked like the devil to arrange everything in top-notch order; Edward Roberts, whose generosity and wholehearted interest has served to stimulate the radio control model field; Erwin Ohlsson, for his splendid support in the silverware division; and last, but decidedly

not least, to the Hotel Fort Shelby and Jerry Moore, purveyor of comfort, service, reasonable rates, tolerance, and beautiful elevator girls.

Our only regret is that in the event that this contest should shift to another locality, we could not hitch the Fort Shelby Hotel to a trailer, put Mr. Moore alongside the driver's seat, and rest assured that everything would be okey-diddle.

At the Academy meeting, the City of Chicago, through Frank Nekimken, of the Chicago Park District, and Maurice Roddy, of the *Chicago Times*, submitted an offer for the sponsorship of the 1940 Nationals. Nothing definite has been released on this offer as yet, but we hope to have full news of it in the near future.

And now we'll have to chase you out—the nurse says our time is up! Be seen' ya at the Nationals next year.

All Questions Answered

(Continued from page 30)

Jerome Lieberman, New York City:—Better contact C.C.N.Y. and M.I.T. on those questions about the schools. We read your various ideas on the model department, and we found them very interesting. Execution of them would be too difficult, however. We no longer have those back issues you mentioned. No, F.A. isn't circulated in France. Yes, many fine shots of early planes were left out of that *Men With Wings* movie because they either

made the picture too long or couldn't be fitted in suitably. It was tough! Try aero books for your other questions. Not enough space in this department to go into 'em.

Stewart Holt, Queens Village, N. Y.:—In drawing cartoons for publication, you should always use India ink on a good grade of drawing board. Sizes should be multiples of sizes you see in the publication to which you contribute—so that the

work "comes down" to the desired measure. Sorry, but our Wisecrack-Ups department is bought up on cartoons at this time.

N. Foster, Homewood, Birmingham, Ala.:—Your Airmail Pal, Hollis Sanders, 1st Division, U.S.S. *Enterprise*, Norfolk, Va., would like you to get in touch with him again. Can do? He lost your full street address somehow or other.

—ARCH WHITEHOUSE

Flying Aces Club News

(Continued from page 28)

ry for them (the modelers)."

Well, fellows, how's about getting in touch with Mervyn if you live any place around his district. Maybe some of you boys can get together.

BEFORE we close the Club News this month, F.A.C.'s, don't forget about that D.S.M. contest of ours that we announced last month. We want all of you lads to ship us photos

of models you've built from FLYING ACES plans right away. And if you're our top-notch modeler of the month, we'll send you a handsome Distinguished Service Medal as your award. Remember, though, to address your letters to Clint Randall, D.S.M. Contest, c/o FLYING ACES, 67 West 44th St., New York, N.Y.

We will not be able to return any photos submitted and the decision of

the judges—Wing Commander Herb Powell, Model Editor Dave Cooke, and Adjutant Clint Randall—will be final. The picture of the monthly winning model will appear on the Club page in each issue. And, of course, only FLYING ACES CLUB members will be allowed to participate.

That's all there is to it, lads. So ship us that photo today! Here's hoping that you're the lucky one!

Death Strafes the Desert

(Continued from page 18)

He saw Crash wave farewell to him, and he pondered on the fact that he would have gladly exchanged his glittering uniform, rank, and decorations for the happy, devil-may-care attitude of Crash Carringer. Feeling responsible for the American, he bit his lip. "The Lord only knows what he'll run into," he muttered, as a

father would fear for a son.

Carringer was now nearing the take-off with his 400-m.p.h. fighter. And in the rare air, he found it demanded all the airmanship he knew to handle her safely, tuck his undercarriage away, and place the correct setting on the variable-pitch prop, on the flaps, and on the horizontal

stabilizer. But finally he lifted her out over the ancient city, climbed her, and headed west.

In the distance to the east lay the desolate hills and the town of Amman which stands near the site of the ancient fortress of Rabbah of the Ammanites, and here and there he saw Trans-Jordan *wadis*—blotches

on the landscape. There, too, lay the Dead Sea and the heat-flaming desert.

Crash noted that the route to Ramleh followed a well-beaten camel track through the desert defiles where dried out river beds marked the land with grim scars. The heat was blinding. It billowed up and caused the plane to dance as if it hung on an unseen shock-cord.

The American continued his course, figuring on crossing the actual course of the Fairey Battles from Amman. If anything had happened to them on the way, there should be some evidence of it, somewhere on the ground.

He wanted to reach Ramleh quickly, but he eased up on his speed to check the ground below thoroughly. He caught sight of a few camel caravans and the turgid life about one or two oases. But there was no evidence of crashed Battles anywhere.

Then, when he figured the fringe of Lydda and Ramleh should begin to appear in the distance, something caught his eye. Out from the north came a large, three-engined commercial plane. It was flying at practically the same height as the Hellion, and Crash studied it carefully and let out a low whistle.

"Looks like one of the Ala Littoria ships—a tri-motored Savoia S-73. What the deuce is that doing over this section of the country? They have no routes through this part of the world."

He pondered on the situation as the Savoia came on, maintaining both height and speed. Crash decided to climb and let it pass under him, but at once he sensed that the big Italian commercial job had turned slightly and had hoiked its nose considerably. It was climbing at an angle seldom attempted by commercial craft, except in an extreme emergency.

"Not much consideration for his passengers," mused Crash.

He held to his course and owing to his speed and ability to climb, passed well over the converging Savoia. At this, the Italian commercial plane swerved, then showed unmistakable evidence of being in some sort of trouble. It wig-wagged its wings, then a small signal panel set on top of the cabin began a frantic series of flutters and flashes.

"They've got a signal outfit there," said Crash. "But what's wrong with the guy? He's apparently going down to make a landing."

The signal panel now snapped off a series of S-O-S signals, and Crash decided that something was radically wrong. But he watched carefully, for he knew that a few minutes before it had been climbing fast and had attempted to cross his course.

"He picked a swell spot to have a forced landing, anyway," Crash considered as he watched the big Savoia curl around and descend in graceful curves until it was in gliding position opposite a straight stretch of sand that ran along the crenelated edge of a gray rock formation.

The big transport now straight-

ened out, blipped its engines again, and left three distinct streaks of inky black smoke. And Crash watched it closely. But the landing seemed normal, under the circumstances. There was one bump as the wheels caught a cross bar of sand and made the big plane swerve and dip a wing-tip dangerously. Then the plane rolled on toward the nubbins of rock that protruded through the sand like the razor teeth of a shark, near the base of the rocky wall.

"You big mutt!" growled Crash. "What did you want to set her down that close for?"

He circled again and waited to see if any of the crew or the passengers climbed out. But nothing happened. He drew his eyes into slits, studied it all again, then the temptation was too much.

"I guess I'll go down and see what this is all about. The guy may be ill, or something."

The Hellion dropped down, wheels in position, flaps lowered two turns, and with prop blades set for the proper pitch. Now she swung into what breeze Crash could discover, and he let her glide in to land near the Savoia. He also thoughtfully took a large automatic from a canvas holster hanging near his knee and stuck it into his pocket. "Just in case there's any funny business," Crash said, glancing over at the Savoia as his wheels touched the desert.

Once down, he left his engine ticking over and sat watching the air giant which could carry eighteen passengers and a very complete crew. He checked the license markings, "I-AGNE." She was powered with three 700-h.p. Piaggio engines and appeared gargantuan as compared with his small Hellion out here in the vastness of the desert.

"Queer!" he mused again, pulling the hatch-cover back. "No one gets out. I can't see a mug at any of the windows. And I don't like it."

His instinct told him to keep away. But the temptation to take just one look was too strong. He fingered his automatic, glanced about his cockpit again—and decided to take a chance.

As he clambered out, he noticed, for the first time, an Arab tribesman, complete with burnoose, shoulder shawl, and plaited leather belt. There was a splash of scarlet beneath the cloak, and the Arab's legs were encased in Subh trousers above the gaily decorated shoes which completed the outfit.

Crash wondered where the man could have come from. Then he decided, after another glance around, that he must have clambered down from the rocky buttress to investigate the plane, possibly figuring on a spot of loot.

"What's wrong?" Crash called as the Arab wandered around from under the tail. He was a tall fellow—tall enough to peer into the rear windows of the cabin.

"Allah give you victory, my Lord," the Arab rasped back. "But I see no one inside."

"Are you sure? No one in the front of the cabin?"

"I cannot see from here, Master. But no person is to be seen from here."

Crash gripped his automatic with greater firmness now. Here was an Arab he couldn't be sure of—and a Savoia apparently with no one aboard. It all intrigued him.

He advanced, watching the Arab carefully. But the native was busy peeping into every window he could reach. Then advancing along the side of the cabin, the Arab clambered up on the wing root from where he could peer into the forward compartment and control cabin.

"But there is no one aboard, Master," he cried again.

Crash stood still, his mind flashing back an hour to the King David Hotel and the mystery of the two Flights from No. 14 Bomber Squadron. Those planes had disappeared somewhere along this route, but how could this great ship land by itself here in the middle of the desert? And could the signalling he'd seen be some automatic device, too?

CAUTIOUSLY, Crash drew his gun and advanced. He eyed the Arab and stood near the wing. "Where did you come from?" he snapped at the man on the wing.

"But Master, I am Maulud Belluwi of Bire. I was there in the shade of the rocks awaiting a caravan from Lydda."

"You saw that plane land?" barked Carringer.

"Of course. One has eyes and one has ears."

"You saw no one get out?"

"Not a soul, Master. I was filled with fear that it would collide with the earth. I was glad to run out and offer assistance—but there was no one to whom to offer aid or succor."

"You got a good line, Maulud. I ought to punch you in the nose, though. What the devil are you *really* doing out here—just at the precise place where an Italian airliner lands in the desert?"

"But Master, I am but a poor merchant of spices. I await Tafas, the Hawazim Harb, who leads the caravan. I only see the plane come down and go to see if my poor aid is required," the Arab argued with no show of emotion.

Crash had to agree that he had his story down pat. He might even be telling the truth. But now Crash had to check the Savoia himself. He slipped between the wide undercarriage of the transport and came up behind the trailing edge of the wing. He clambered up on the root and looked inside the forward compartment, to find it luxuriously furnished but bare of occupants. He frowned, moved forward to the side of the Arab, and glanced inside the two-wheel control cabin.

"That's a pip! There's really no one aboard, is there?"

"No, Master," the Arab answered. "And I cannot comprehend it at all."

Crash turned, scotched down his rump, and studied the Arab. "Let me see your hands," he demanded.

The Arab stuck them out frankly, displaying a pair of sunburned fists that were murky with sand, long nailed, and decorated with the usual lineup of heavy rings and jangling bracelets. Crash shoved the sleeves of the Arab's Nejd cloak up and found that the sunburn and muck extended to a point well above the elbow.

The man was apparently just what he claimed to be, and his countenance, carved on hawkish lines, continued to be stoic in the face of the suspicions displayed by the American. He said nothing more, simply stood still on the wing as Crash dropped on the sand again.

"We'll try to get inside," said Carringer. "There *must* be someone aboard. This ship was landed by human hands—somehow."

As he said that, Carringer remembered that there was such a thing as radio control. The British Navy, he knew, had Queen Bee planes that could be taken off, flown in the air, and brought back to fair landings through no other medium than the radio. Could this giant transport have been flown that way? If so, why?

He moved along the cabin, still peering in the windows, until he reached the door on the port side. There he grasped the handle, sunk in a streamline well, and yanked the door open. He now raised his gun and started to step up and inside. At this point, the Arab came down off the wing and also approached the door.

"You stand here, Maulud," ordered Crash. "Don't let anyone get out."

"Yes, Master. But certainly there is no one aboard, but yourself."

"I'll make sure of that first. You stand there where I tell you."

"Yes, Master," came the even reply.

Crash went inside, jerked open the lavatory door, and held his gun ready. There was no one in there. He moved up the aisle between the blue-velvet chairs. There was nobody anywhere.

Now he opened the door fitted in the main bulkhead and entered the forward compartment, which accommodated four persons. This was raised slightly and had to be entered up a few steps. Crash peered about, then moved past the aviator's compartment on one side and looked into the radio operator's cabin on the other. No, there was no one aboard—anywhere!

"Damned funny," said Crash aloud.

He went on through to the control pit. There was nothing there, either. A map of the area was set in a frame, the stubs of two cheap French cigarettes were in an ash receiver, and a popular edition of *Revolt in the Desert*, by T. E. Lawrence, lay on the co-pilot's seat.

Crash picked it up, flipped the cover. There, in a Teutonic script,

was written *Erich Torgler, Damascus, 1926.*

"Queer," said Crash. "Could it be that this has something to do with the mystery?"

He thumbed through the pages seeking some marked chapter or paragraph which might give him a clue. The book was well worn, faded by the sun in certain sections. But there were no marked portions or anything that would give a hint to the meaning of the strange puzzle.

He checked the plane by the instruments and saw that it was well supplied with fuel. He pondered on that, too, because if it had been flown from any Italian port of air call outside of Palestine, it would have already used considerable gasoline. Of course, it might have been fueled at Jerusalem, but he was certain it had not been there when he had been there. Then again, it might conceivably have refueled at Amman—but that was unlikely since Amman was a closed R.A.F. station. With the amount of gas shown on the gauges, it could not have been flown very far at all.

"I give up," said Crash. "This surely is one for the book!"

That comment reminded him of the Lawrence book again, and he opened it, moved into the forward passenger compartment, and sat down to ponder. This time, he found a page near the end of the book that appeared to have been diligently studied. Frayed and worn, its print near the margin had been almost erased by much fingering.

Crash started to read the full page. It began—

... The third part, the smallest, was made up of German and Austrian machine gunners grouped around three motor cars and a handful of mounted infantry officers or troopers. They fought magnificently and repulsed us time and again despite our hardness ...

Crash bit his lower lip. And now his right hand, which had been thrumming along the plush of the seat, came upon something hard—something metal that had slipped down near the back of the reclining chair. He drew the object out, stared at it.

It was an emblem, circular in design with a British crown at the top. In the center, on a field of white enamel, was a winged orb on which was mounted a Crusader's helmet. In the garter about the inner circle were golden letters that spelled. *14 Bomber Squadron, Royal Air Force.* Below on the base ribbon was some sort of an Arabic inscription.

"That's one of the new R.A.F. Squadron badges," muttered Crash. "It belongs to someone in No. 14. Wait a minute! That means this—"

But Crash got no further. Something crashed down on his head from behind and set up a curtain of brilliant splintered stars before his eyes. He sensed that he pitched forward

and hit his face with a dull thud on the dural floor.

SOME TIME LATER he came to, conscious of a terrific heat of some sort enveloping him. He had a salty taste in his mouth, and his head throbbed like a trip-hammer. His fingers instinctively pawed at his face, slithered through dull red ooze that was trickling down from a wound somewhere on his head.

"The devil!" he muttered, half blinded by glare and gore. "That fiend . . . that Arab . . ."

But this was no time for further reflections. Something warned him through a sixth sense to make a quick move. A flicker of flame was lashing across his view like the forked tongue of a viper. He got to his knees, squinted at the glare that was running along the floor like a golden rivulet. It was pouring down the steps from the control pit—a torrent that hissed, crackled, and spat.

Carringer climbed upon the seat, tried to figure it all out. Fire . . . inside the Italian plane . . . cabin might be locked . . . he must get out!

Numbly, he reached down for his big automatic which gleamed up from the floor. Already the stream of fire had passed down into the main cabin and was bringing up with a flaming splash against the aft bulkhead. There was no escape that way.

Then his mind cleared, and jumping up he kicked away the thin veneer that formed the wall and tore out a wide section, just as the billowing flame backed up again into the forward compartment. He battered away at the wall, then rammed the muzzle of his gun against a dural former rib and fired.

He swayed again, steadied himself against the wall, and found another former. The big gun bellowed once more, blew out another joint between the former and the main spars. *Crack! Crack! Crack!*

Finally, the great slugs had slashed through the sheeting and fanged out long gashes. He saw daylight beyond. Then he kicked wildly at the shapeless panel his gun had carved out.

Once, twice, three times—then the sheet dural folded back and Carringer's leg went through, his trousers ripping from knee to thigh. He drew back his leg, steadied again, gripped the top of the dural sheet, and with superhuman efforts rolled it down with all the grim power he could muster—to open a space big enough to slip through.

He pulled himself together, glanced around. He saw the book on the seat and tossed it out. Then he wriggled his way through the opening and lowered himself to the wing root. From there he fell.

He hit with a thud, knocked the wind out of himself. But his reflexes made him somehow keep on and roll well clear of the burning Savoia. And Fate was only a step behind him—for at that instant the Savoia ex-

ploded with a roar as the fuel burst out from the tanks. The metal cabin was blasted asunder, sending an engine toppling end over end to hit in the sand ten yards away. A wing collapsed and ripped its root open, leaving a wide gash that reminded Crash of some monster's mouth baring menacing fangs. A gigantic cloud of smoke arose and the desert heat carried it aloft to mark the place where a man was supposed to have been cremated.

Crash lay there in the sand for some time, shielding his face with his arms and drawing deep to regain his breath. In the distance, he had heard the familiar roar of an engine above the crackle and harsh rumblings of the burning Savoia.

"I should have known," he muttered through parched lips. "That guy flew that Savoia here himself. He bopped me when I found that 14th Bomber Squadron badge. And he left me to burn up. He's swiped the Hellion now—and here I am, miles away from anywhere!"

Crash was still dressed just as he had been for Mount's wedding. A light linen suit, white buckskin shoes, and a white shirt. His coat and trousers were ripped to shreds now, and he was scorched, and murky with grease and dirt. He pondered on all this as he sat, supporting himself with his hands behind him, and watched the stricken Savoia consume itself.

Then he turned his head with an effort and looked into the distant sky where his Hale Hellion had disappeared.

"Bright boy, you are, Carringer," he argued with himself. "Let a dumb Arab put one over on you like that. Very clever lad you are. And you'll now have plenty of time to consider it all, too. You're likely to be out here on the desert for days—thirst-wracked, awaiting death!" And for minutes he mentally horsewhipped himself for his dumbness.

Now he picked up the Lawrence book again, stared at the name in the flyleaf, then went back to the paragraph he was reading when his hand came upon the badge of the 14th Bomber Squadron.

He read—

The Arabs were fighting like devils, the sweat blurring their eyes, dust parching their throats. The flame of cruelty and revenge which was burning in their bodies so twisted them that their hands could hardly shoot. By my order we took no prisoners for the only time in our war.

"Queer," muttered Carringer, letting the book fall. "Much of that could have happened right near here. Colonel Lawrence was on his way to capture Damascus when that occurred. Took no prisoners, eh? I wonder . . ."

He sat and pondered on it all, his mind conjuring up a situation where one of the Germans or one of the Austrians—one who might have been

named Erich Torgler—could have escaped from that massacre of more than twenty-five years before. Escaped to come back and . . .

"But that idea's screwy," he argued with himself. "This guy Maulud's an Arab. And yet he knows how to fly anything from a three-engined plane to a Hale Hellion!"

It didn't make much sense to Crash, especially with his head still throbbing from a blow that had cut a deep gash across his scalp.

"Well, I might as well get in the shade and try to rest," he muttered to himself. "If I'm to be picked up, it will be through that column of smoke from the Savoia—which someone should see, if there's anyone alive on



this desert and within twenty miles."

He got to his feet, tottered wide-legged and stiffly toward the pinacles of rock that frowned down on the remains of the burning plane. He spat to clear his throat, wondering how long he could hang on without water.

"Swell guy you are, Carringer," he flayed himself again. "One of the most brilliant. Get yourself slugged by an Arab and left out in the desert to rot. Well, you've read about this sort of thing, and you've heard guys talk about being thirsty. But I'll bet you ten of the best bread plates in Dresden that you're really gonna know what it's like to be thirsty this time!"

He staggered on, weariness gripping his muscles. Strange dots and streaks danced before his eyes. But he drew his shoulders back, flicked the last trickle of blood from his eyes, and lurched on. The shadows of the rocks were his goal now. If he could only make the shelter of one of them and huddle against its base, it might provide a cool haven, for a few minutes at least.

The sand and shale beneath his shoes gave a treacherous footing. Continually, he had to fight to keep his balance. Finally, he slithered down a minute slope, faltered, and fell to his knees.

Weakly, he brushed dancing dots and flickering lines from before his eyes. "Got to get through," he told himself. "Got to make the shadow . . . somehow."

HE OPENED his eyes again—and suddenly stared at the sand. He blinked, rubbed the back of his hand across his face—and continued to stare at what he saw impressed in the gray desert grains at his feet.

"Going screwy, eh?" he argued with himself. "Seein' things!" But to make certain, he stuck out a finger and traced the design he believed he saw in the sand. Sure enough, there was a "chain" design there!

"Tires!" he gasped. "Tires of some sort have recently rolled over this stretch!"

He arose and let his eyes follow the track across the sand. It went off into the distance to reach its point of perspective up beyond where two shafts of rock stood like gaunt gray sentinels.

"This track," he muttered, rubbing his hand across his mouth, "was made by an armored car!"

With another game effort he got to his feet again, and eyes on the gash between the two rocks, he began a crazy, zig-zag march along that trail in the sand.

It seemed like many miles. He fell twice full on his face and almost choked with the sand, but he always got to his feet again and with arms outstretched staggered on like an exhausted marathon runner struggling toward the tape. And finally he reached the base of one of the shafts of rock.

"Lord!" he cried, folding his arms against the rock and burying his face in the comfort of his elbows. "I'm scared to look any farther."

But again he drew his head back and peered on into the shadows. And then hope welled up in him as he sorted out the blacks, gray, and dull yellow shadows—and spotted something.

"Th-that is a car there—an armored car! They were armored car tracks I saw. I'm not nuts! It is an armored car!"

He let out a yell, then clapped his hand over his mouth and glanced about quickly, half-expecting to arouse an enemy. But no sound broke the silence, so he plodded up beside the machine, which stood on a flat carpet of sand near a low rock wall.

THE SIGHT of the gleaming Lancaster car had stiffened the sinews of his limbs. He noted the No. 2 Armored Car Squadron insignia painted on the gun turret. He steadied himself by planting his palms flat on the heavy metal hood, then peered through the shatter-proof glass in front of the driver's seat.

"Hey!" he yelled at the man inside. "What's going on here?"

But there was no response. The man inside, wearing a Tank Corps beret, open khaki shirt, and a Webley pistol belt, made no move, did not even blink his eyes. Crash hammered on the hood with the palms of his hands, yelled again.

Still no response. The man was stone dead!

Crash moved painfully along the hood, gripped the metal handle of the door, and wrenched it open. The man sat there, stiff and stark, eyes forward through the glass and his hands in a normal position on the wheel. Beside him sat a Tank Corps officer wearing a military topee, khaki shirt, and Sam Brown belt. He too was stiff in death.

Crash edged his way in and stared back into the rear compartment

where he saw another corpse seated at a small, compact radio set.

"Cripes, they're all dead!" Crash muttered.

He went out, sat down on the running board, cupped his chin in his hands, and tried to figure it all out. Three gloomy-eyed vultures now circled overhead; Crash swore at them, then got to his feet.

He somehow lifted the driver out, took the fellow's Webley, inspected it, fired two shots up at the vultures and drove them away. Then he tugged at the young officer, a lad with a pale mustache. He was lighter in weight, but the stiffness of his body made his handling difficult to the weary American.

Crash laid the two bodies together and made a quick but reasonably thorough examination of them. There was no evidence of foul play, no marks, bruises, or wounds—just a faint glistening of some crystalized substance about their lips.

"Poisoned!" said Crash.

He went back to the car, opened the first-aid locker, and brought out iron rations, and a felt-covered water bottle. He drank eagerly of the water, as warm as it was, gnawed on one of the Army biscuits, then opened a small cannister of corned beef. This gave him new life, and he now took time out to clean up the wound at the back of his head and apply a suitable bandage. Then he borrowed the dead officer's topee and finally dragged the wireless operator clear. He covered the three bodies with a tarpaulin found in another locker in the turret compartment, weighted it down with stones, then pondered the whole situation.

What was the armored car doing there? Why had the driver managed to get it this far, only to switch off the engine, take it out of gear, and apply the emergency brake before he died? Where was it heading originally?

He went over the maps, signal books, and other items taken from the pockets of the three men. There were no specific orders, and the map was only an ordinary British Ordnance Survey chart of the area, showing contours, caravan tracks, and oases. After a few minutes of contemplation, Crash came to the conclusion that the car had been sent out on a routine patrol covering the territory over which the incoming planes from Amman would fly, in order to be ready to offer assistance in case of a false landing by one or more of the craft.

He went inside again and went over the signal reports of the wireless operator. But there was nothing but a routine series of reports from a few desert stations. Nothing to indicate just what had happened.

"If that guy Maulud Belluwi flew the Savoia here—which I'm now sure he did—he had nothing to do with this armored car," argued Crash aloud to himself. "He was aboard that Italian transport all the time and most likely didn't even go near these

rocks or see the armored car. But there must have been at least one R.A.F. guy aboard at some time, else how did that badge get in that seat?"

He thought it over, then wondered what he ought to do next. He took another drink of the water—only to spit it out abruptly, realizing it might contain the poison which brought death to the armored car crew. Maybe the first drink of the water he'd taken would "do" for him. Maybe Fate had already caught up with him. But not having yet felt any ill effects, he was reassured.

"I'll warn that guy Hovis, at any rate," he said. "I'll try to get the wireless set working and pound out



a message for the headquarters station at Jerusalem."

He snatched the signal pad, wrote out his message in Morse signals, and tried the set. The spark was hot and seemed adequate. He took down the call book, snapped the ear-phones on. Quickly, he found the call letters for the Jerusalem station and pecked at the brass key until he got a response. Then carefully and slowly he tapped out—

Down eight miles east of Jimzo. Armored Car No. 6 of No. 2 Squadron found near caravan track. Crew dead by poison. Car in good condition. Hellion captured by Arab named Maulud Belluwi who was flying Savoia S-73 faking distress. Belluwi escaped to north. No trace of planes. No. 14 Bomber Squadron badge found on seat of Savoia which may be clue to disappearance of planes. Heading for Ramleh.
—Carringer

Getting a "message received" confirmation in return, he grinned: "That ought to give Hovis plenty to worry about. Now where do we go from here?"

It was getting late now and the light was fading fast. He took what weapons and ammunition were handy and stacked them on the seat beside him. Then he started the motor, released the emergency brake, and backed the car out of the shelter of the rocks. He swung it around hard, checked the compass, and headed across the dunes for Ramleh.

The Lanchester, he found, was a beautiful machine. It was well protected with Vickers armor plate and had a rotating turret aft in which a modern Vickers gun was mounted. In the space fitted up for the commanding officer alongside the driver's seat, there was a fighting slot carrying a Lewis gun. The radiator was well protected with an armor guard, and the window before the driver's seat had a folding armor panel slitted for vision during action.

For a time, Crash gloried in the

fun of driving the speedy machine across the wastes. He hurtled her between the dunes, steadied her down the slopes, guided her carefully up the shale and shingle that marked the windward sides of the mounds.

He had covered some distance when he suddenly sensed that there were planes somewhere in the vicinity. He frowned as the boom of the motors became more audible. He shoved the hatch panel back and peered up.

The sight almost made him turn the armored car over. Above him, in beautiful formation, flew eleven glistening Fairey Battle bombers! His mind told him there should have been twelve.

And leading the grim formation was his own Hale Hellion!

Crash swallowed an oath and brought the car to a standstill with a scream of brakes and a flurry of sand. He darted back to the rear turret, wrenched the retaining lug clear, and was about to pour a burst of lead into the formation when something—some strange instinct—caused him to hold his hand. He watched a minute and saw the pilot of the Hellion fire a signal light, drop away from the formation, and circle for a landing.

"Judas! The guy's coming down," he gasped, rushing back to the driver's seat. "I wonder if he nipped that message I sent to Hovis?"

He waited, watching with tight-slitted eyes.

The Hellion came down in a beautiful sweep, sideslipped daringly, and glided in against the wind. Crash had to admit the guy could fly. He groaned, however, as the wheels hit a bad depression and almost threw the craft over on a wing-tip. But the pilot blipped the engine, straightened her out, and brought her to a stop alongside the Lanchester.

"Come on, baby!" said Crash under his breath, gripping a Webley pistol. "Step over here and get it!"

He sat still and saw the Arab, who was still wearing his desert headcloth, climb out and advance toward the armored car. He drew back into the shadows of the interior and waited. The man came on bluntly and wrenched the door of the car open with an officious snarl.

"Swell!" greeted Crash, ramming the muzzle of the pistol forward. Come in, Aladdin. I'll show you how we play at this game!"

THE ARAB went as pale as his complexion would allow. He was staring into the face of the man he believed had been consumed by the flames of the Savoia. He started to back away, apparently hoping to signal the bombers, which were still continuing their course toward the west.

"Nothing doing, my dear Belluwi," snarled Carringer. "You came down to pull a bluff of some kind, I know. And now you're going to stay down!"

"You foul infidel of a dog!" half screamed Belluwi. "I will soon have

you for a donkey slave!

"You'll do nothing of the sort—except give me your clothes." And Crash snatched off the gaudy headcloth of the man and yanked him down into the driver's seat. Then he ripped away a long band of linen cloth that Belluwi had bound around his waist and carefully laced him tightly to the seat of the armored car. Also he trussed the Arab's hands with the leather bindings from his gaudy footwear.

The desert man was silent, but his eyes blazed as he realized that he had been trapped. Crash next removed his cloak and stacked it all on the commanding officer's seat.

"Where are those bombers heading?" he demanded, adding more bonds to the man's legs.

"Where they will do the most good," snapped the man. "And it will be too late then by the time you find out."

"We shall see. Now then, where have you imprisoned the crews of those planes?"

"They are not imprisoned—except by the bonds of Death."

"Poisoned?" asked Crash. "Like the poor devils who made up the crew of this car?"

The eyes of the bound man gleamed.

"You devil! Well, you'll have plenty of time to think your crimes over while you wait here. Of course, I could pour a little gasoline in this pit and carelessly drop a match, too, you know."

"Allah will not always be so good to you," Belluwi said with a coarse voice.

"Allah?" snapped Crash. "What do you know about Allah? You are an unbelieving fiend if ever there was one. And I'll bet a few bucks your name is Torgler—or something like that. This get-up of yours is a gag. You did a good job of staining your skin—but it's a fake."

The bound man sniffed. "Whatever I am, I will yet see revenge for what happened at Miskin . . . years ago."

Crash stopped and stared at the man. "You were in that massacre, then! That account by Lawrence! I read it in the book you left."

"I was the only one who escaped. I was spared in order that I might live to inflict revenge on the British. Miskin! We would have surrendered—but we were given no chance."

"That's war, Torgler. You—a soldier—should know that."

"That wasn't war—it was murder! A surrendering man is sacred according to the humane laws of war!" argued the captive.

"You'd better think twice on all that, Torgler. You had better reflect on the Black Hole of Calcutta, the invasion of Belgium, the torpedoing of unarmed Mercantile Marine ships, the bombing of defenseless Spanish and Chinese cities. You birds are the last ones that ought to talk about the sacredness of the defenseless."

"Bah! You know only one side."

"That goes for you, too. But don't forget that you left me to die in that burning Savoia—for I haven't forgotten it. Now what about those bombers?"

"Those planes have been captured for a special event. They carry British markings—yet they will soon make a raid that will inflame the whole world against Britain. Then, let the English talk their way out of that!"

"Raid on Jerusalem?" said Crash.

"Confound it, who cares for Jerusalem? This is something much more important—something they couldn't replace in years. We will see what the vaunted British Empire 'life-line' will be then!"

INSTANTLY, on the words "British Empire life-line" Crash caught it. They were out to bomb some key points of the Suez Canal! The Suez was only about two hundred miles from here. Those bombers would be there in something like an hour!

They were circling over the desert now apparently waiting for the return of this commander of theirs who called himself Maulud Belluwi. Crash had to make some quick moves if he figured on scotching this mad plan. He glanced at the radio set, but gave that up. It would take too long to put through a code message and get aid back to the scene. He decided on another scheme.

"Well, we'll see about all that, Torgler. In the meantime, you can sit here for a good long period and think it all over. We'll be back for you later on—if you can hold out. Now I'll play an 'Arab' game—I'll become Maulud Belluwi!"

Quickly, Crash threw Torgler's desert cloak over his shoulders and backed out of the car. Next, he drew on the Arab head-dress and slammed the door shut. The Fairey Battles above continued to circle at about 3,000 feet. They seemed to drone on like anxious hornets.

Crash drew the expensive burnoose about him as he ran. He was more than delighted to find that his sleek Hale Hellion appeared to be undamaged. He climbed aboard, kicked the starter, and the steel prop snapped into action.

He adjusted his belt, checked the instruments, and discovered that the plane had been recently fueled. He pondered on that, remembering the case of the Savoia which had landed here in the middle of the dessert with tanks that were practically full.

"These guys have a base somewhere near here," he argued with himself. "And I should think Hovis and his gang would know where it's likely to be. That's an idea, too."

He glanced up again, saw that the bombers were still apparently waiting for him. He snapped the switch of his radio set, clapped on the headphones, and took up the mike. He remembered the numbers and call letters of the Jerusalem station and began to call wildly. In a few seconds he got a reply—

"Palforce Station, Jerusalem . . . Palforce Station, Jerusalem . . . Go ahead, Mr. Carringer . . . Palforce Station . . . All clear . . ."

"Carringer aboard Hale Hellion . . . on desert near Jimzo. Get this report through to Wing Commander Hovis at once . . ."

"Wing Commander Hovis is here . . . present here in the station now. Go ahead, Carringer."

"Good! Get this quick. I have my Hellion back again. I trapped this bird Maulud Belluwi with the armored car. He is a prisoner aboard it now. About two flights of Battles are flying above me—and I believe they plan to bomb the Suez Canal!"

The voice of Hovis came through excitedly—

"But are the Fairey Battles in Arab hands, Carringer?"

"They aren't being flown by the London Balloon Barrage squad. Of course they're in Arab . . . or renegade hands. I think this guy I nailed is a fellow named Torgler who was in that memorable mess outside Miskin—you know, that Lawrence of Arabia massacre during the Great War."

"The devil! I didn't know anyone escaped!"

"This louse says he did, and he's out to knock off every living Britisher he can find. He has your planes, at any rate. He must have used some sort of slow poison on your flyers. They evidently landed their planes when they began to feel bad. Torgler apparently has rounded the lot up and is off to do the deed."

"Where are they now did you say?"

"Flying overhead here, waiting for Torgler—Maulud Belluwi, as they know him—to come up and lead them again. They now think I'm the Arab. I'm going upstairs and let them take me to wherever they're going."

Hovis let out an audible gasp—

"But that's suicide!"

"It might not be that bad, but it will be some excitement for a time, I guess. Wait a minute—have you any idea where they could have hidden fuel in this area? They all seem to be getting supplies from somewhere."

"Imperial Airways has an emergency station connected with the Iraq Petroleum Company at Beit Nabala . . . That's about ten or twelve miles north of where you must be now. There's only a small crew there at all times, and the men could be quickly overcome, I suppose."

"Swell arrangement," growled Crash.

"Look here," said Hovis quickly. "The Battles were not loaded for bombing. They had no bombs. They will have to get some from somewhere. You go into the air, try to lead them back to Beit Nabala—and meanwhile we'll try to find 'B' Flight and get them there to render assistance. Perhaps we can get No. 6 Squadron, now on tactical exercises at Haifa, to get there in time, too."

"They have no bombs?" squealed

Crash. "Good! Then they've got to get some before they can do any bombing, if that's what they plan. That at least gives us a break."

"But they can get some at Ramleh, of course—if they have the nerve to try to raid the place."

"That's right," cried Crash. "And there's no one there on the restricted field. The armored cars all went out, I suppose, and they all probably wound up the same as No. 6 car which I found."

"I'm afraid that's the way it is. Well, there's no time to waste. Get into the air and try to lure them to Beit Nabala," suggested Hovis.

Something spattered outside, and Crash stared out. There were bullets coming from the turret of the armored car! He ducked low, released the wheel brakes, and started the Hellion moving.

"Wow! I got to get into the air," he bellowed into the mike. "That Belluwi guy has slipped his bonds. He's firing at me from the armored car turret. Will report later." And he frantically fed gas to the Hellion and bounced off over the uneven terrain of the desert.

CRASH had to give all his attention to the take-off. The Hellion, rocked and staggered, once almost nosed deep into a sand dune. He brought her around, lined her up again, and raced away under the spray from the Lewis gun behind him.

The Hellion leaped into the air after her unsteady run, and Crash curled her around in a climbing turn. Then he gasped when he sensed the full significance of Torgler's escape. That devil had been smart enough to warn the Battles above by radio from the armored car. The eleven gleaming ships were coming down at Crash like a swarm of giant hornets.

"Holy Mackerel! That guy is something to write home about," he snarled. "Still, I wonder what happened to the twelfth plane. Should be one more."

He nosed up hard, adjusted the firing gear, and let a spatter of Browning lead beat into the first Battle that came in range. The British ship curled away and another passed close, its gunner pouring a wicked spattering of fire at the Hellion.

Crash zig-zagged out, nosed up again on the flaps, and bashed full into the formation of Fairey Battles.

They were stunned for a minute, the gunners hog-tied. They shot one or two bursts, but their fire converged mainly on the other planes in their formation. Crash quickly got in his work, ruddered his way in and out and splashed lead right and left.

He took a chance now to peer below, and he saw that the armored car was well under way. It had turned around and was heading at top speed off across the desert.

"Now where the hell is that guy going?" Carringer muttered as he banked around once again, then

slammed back into the Battle pack.

The Battles, fully enraged now, took wild chances and threw load after load of Lewis at him, causing the Hellion to ring with the thud of ammunition which was battering at her dural sides. Crash darted in and out, pecked short, murderous bursts here and there, and finally put one Battle into flames. Then he high-tailed it after the armored car.

The Battles lunged at him again, and once more the rattle of bullets jangled along the longerons and made Carringer wince. He now hurled the Hellion at two Battles that had dived in to protect the speeding armored car. His heavy caliber stuff sliced the wing from one, flipped it over. It belched a gigantic cataract of fuel which looked like greenish-blue blood bursting from some slashed vital organ of a prehistoric monster.

The wretched Battle swerved sharply, hit with an ear-splitting report full into the nose of its companion ship. The collision of their silver bodies was like the clangor of crashing boilers. There was an explosion, a belch of flame and smoke, then they plummeted toward the desert, a tangle of wrenched and battered metal.

Another rattle of gunfire roused Crash out of the split-second observation of the crash and he had to swing wide again to get clear. He sensed that there was no use in taking any more chances against such numbers, and since the light was getting bad he sped the Hale job into a steep climb and went well above the Battles, where he watched them reform and swing back toward the west.

"Hovis was right," commented Crash. "They're going on through to Ramleh and get bombs. They're licked until they get a load."

He continued to climb, meanwhile trying to contact Hovis again, but no sooner had he snapped on the switch when he sensed that he had taken one burst too many. The set was stone dead.

"Hang it!" he snarled. "Now Hovis will have no idea where to send No. 6 Squadron—even if he can get them in time. This leaves everything completely up to me."

A quick decision had to be made now. The stolen bombers were heading for Ramleh, the Air Station of the poisoned dead. There they would find supplies, fuel, ammunition, and bombs—enough to carry out a plan that might set the whole world against the British Empire. Crash realized that the Suez Canal was not a British possession, but a property owned jointly by an international syndicate. The government of Egypt had made arrangements with Britain and France to protect it, and it was to be kept open for all trade regardless of international conditions. British and French troops were in charge there. But if a squadron of British bombers carrying British-made bombs were to attack certain sections of the canal, the resultant closing of the waterway would be

construed as a direct British act of war. It most certainly would be so considered by Italy. Egypt, too, would be shocked by the act. And at the same time the bombing would break a most important link in the so-called Empire life-line of England.

Somehow, those bombers had to be stopped!

A quick decision had to be made, and Carringer made it. He swung around hard in the slatey-blue twilight, nosed down, and hurtled toward Ramleh.

His flaps were drawn up now, the prop set for top speed, and Crash adjusted every item on the motor control to get the most out of the Hellion. He set himself for a mad race—for he had to get to Ramleh before the Battles!

The American fighter hurtled down until her smooth belly was only a hundred feet or so above the undulating dunes of the desert.

He was so intent on this dash to Ramleh that he had almost forgotten about Erich Torgler *alias* Maulud Belluwi, the German who had tuned his life to revenge a massacre that had taken place more than twenty years before.

He was hurtling along over the sand, tense and keen to beat the Battles in. He did not see the avenging silver bomber which had broken away from the formation on the orders of Erich Torgler. It was roaring full at him from behind with two front guns firing a veritable torrent of lead before he realized what he was up against.

"Lord!" Crash blazed, just seeing it at the last minute.

The Battle came on full tilt. There was no room to clear. For the rene-gade pilot, it was zoom, crash head-on, or attempt to dive under the Hellion. If the Battle flyer was brazen, it might mean a collision that would finish them both. Crash had to gamble on it.

He sat back expecting to take a burst full in the chest, or see the bullet nose of the Battle slam into the dural streamlined nacelle that sheltered him.

Crash choked back a sob, closed his eyes, and hung on, holding the stick with all the strength of a madman. If he zoomed up, the stream of pellets from those Vickers would eat deep into the body of the Hellion and he might stop one, jerk by reflex action, and stall her hopelessly. He waited for the crash—then sensed that the bomber had given way at the last second. He held her tight, maintained his height, and finally dared to turn back.

The Fairey Battle was struggling at the top of a mad zoom. The gunner was spreading a last wild blast at him, so keen on the kill that he did not realize that his own end was so near.

Then the Battle floundered over on her back, started an inverted flat spin, and finally fell off thoroughly out of control and thudded head-on

(Continued on page 70)

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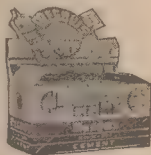
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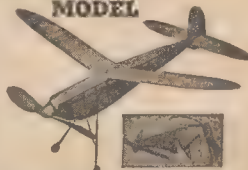
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into a sand dune with a resounding crash. And the flames she sent up lighted a quarter of a mile of desert.

"Whew!" said Crash, wiping his forehead with his forefinger. "That guy must have been at this low altitude for some special reason."

Then he smiled. "I get it! Torgler sent for one of them to come and pick him up. He intended to drive the armored car over the desert with his lights on so that he could be spotted quickly, transferred to the Battle, and brought to Ramleh. Well, loss of the pick-up ship will hold him up a little longer, anyway."

THE HELLION hammered on toward Ramleh, skipping dunes and avoiding sparse palm trees and menacing rocks that protruded from the sand like decaying teeth. He glanced back once and dimly saw the formation of Battles plodding along at about 200-m.p.h., but they were playing safe and keeping at about 4,000 feet. He could only hope that they might figure that the glare of the burning Battle back there was the consumption of his Hale Hellion and not one of their own Battles. He hoped that the spearheads of flame jetting from his exhausts would not betray him.

The fringe of the Ramleh aerodrome came into view within another three or four minutes, and Crash realized even from where he sat that there was an ominous blankness about it all. Ramleh being a restricted field, no civilian or native would attempt to enter it. Hovis wanted this case kept reasonably quiet, and until he was certain that "something had slipped" he did not intend to let the news of Torgler's effort become general news. He figured it was not well to let the natives know of these things until it was absolutely necessary.

The field was bounded by a high steel-wire fence set in concrete. Crash could see the hangars and sheds, and from the sketch drawn by Hovis he was able to make out the details of the layout. He zipped over the surrounding villages at top speed now and finally drew back on the throttle and let the Hale plane slide over the barbed wire top of the fence and drop down gently. There were no lights anywhere. He let her roll to a gentle stop while he considered the sketch again. Then after a minute's reflection, he ran her well across the field to a distant corner and shut the Allison motor off.

He could hear the boom of the Battles not far away now, and he quickly hoisted the tail of the Hellion, swung it around so that she would be handy for a quick take-off, and drew her even deeper into the shadows of some palms that drooped their fronds over the wire.

"Now for it! Let's see how far this thing has gone," he said.

He drew the Arab cloak about him, tightened the head-cloth, and brought it well up about his shoulders to shield his face. Then follow-

ing the fence, he came upon the eastern gate where the figure of a sentry stood silhouetted against the dull glare of the distant town. Crash peered at the man from a short distance and noted that he was motionless, appearing to be leaning on the muzzle of his rifle.

"What the devil? What sort of sentry-go is that?" Crash asked himself.

He crept up carefully, wondering just what to do if the man challenged him. Closer and closer he came, then he realized the full extent of the situation.

The R.A.F. man in pith helmet, khaki shirt, and shorts was standing wide-legged. He was leaning forward with the muzzle of the rifle against the pit of his stomach.

Crash went up and stared at him. The man was stone dead!

"Same thing," said Crash, drawing the tip of his little finger across the man's lips. "Poisoned!"

He drew the muzzle of the rifle away and the body toppled forward. Crash caught it and carried it back to the black and white striped sentry-box. He placed the still, stiff body reverently in the box.

"Torgler, you swine!" Crash broke out.

It was obvious that this sentry had suffered the same fate as the men in the Armored car. The wretched fellow had carried on like a soldier until the first pangs of the silent death had begun to take hold. Then he had tried to steady himself, realizing that he was on sentry-go. He had bolstered himself by spreading his legs and supporting himself on his rifle. He had died that way—loyal to his service to the last.

Crash took the rifle, checked the magazine, snapped the safety-catch back, and hurried up the cinder roadway. Into the first hangar he walked—and stumbled over several bodies in the darkness and kicked against a number of bottles.

"These guys been drinking?" he asked himself.

He picked up one of the bottles and flicked a match with his thumb-nail. The label disclosed that it was the container for a particularly expensive brand of port wine. There were several such bottles about.

"They're drinking the King's health in some rare stuff if they use this brand regularly," Crash muttered.

He cut through the back of the hangars and found the orderly room. The door was partly open but blocked by the body of the Orderly Sergeant who had sprawled across the floor with the same film of crystalization across his mouth. Then he remembered something that might help. "The Squadron log!" he clipped.

He glanced about again and finally fumbled his way to the door that most likely led to the Squadron Commander's office. No dead men lay here. But the Squadron log was on the right hand corner of the desk.

He flicked the pages and checked

the last date. There, with the aid of his flashlight, he came upon the following entry:

Arrival—Maulud Belluwi piloting Savoia plane. Destination Baghdad. Landed on special permit granted by C.O. Middle East Command, Cairo. Claims to be Maulud Belluwi, former Arabian warrior connected with Colonel Lawrence's forces during World War. Gave dinner at night prior to Flight leaving for Amman and generously donated several cases of Milfontes port, both to Officers' and men's messes. Gift gratefully received. Planning to take off himself in morning with a Squadron observer accompanying.

That was enough for Crash. He knew now what had happened. Torgler, masquerading as a former Arab warrior with Colonel Lawrence, had arrived on forged landing papers and presented the squadron with cases of poisoned wine. In all probability the poison had been mixed so that it would take effect at a later hour—probably about twelve hours afterward. This had given the pilots and observers time to get into the air. Then, sickness overtaking them, they had made an emergency mass landing at Beit Nabala where the incoming flight had spotted them and had landed to investigate.

That was all Torgler required. His mob was waiting at the Beit Nabala station which they had taken over. They'd obtained the first group's planes and then had nailed the others as they came in to check matters. Unless Torgler had massacred the incoming "A" Flight personnel, there was a chance that they would be able to fit in the details later when they were relieved.

"Yes, that's how this guy got away with it," muttered Crash. "He slow-poisoned the outfit and let them get off, timing the effect so that they would most likely just make Beit Nabala and land—to die. They probably radioed the oncoming 'A' Flight to stop off at the emergency station and help them out, believing they were only suffering some form of ptomaine poisoning. They probably hung on by their eye-teeth to get down safely—only to fold up. Poor devils!"

"And that business about the Squadron observer accompanying that swine when he left in the Savoia explains a lot, too. Torgler accepted the offer of an observer simply because he didn't want to arouse any suspicions. Then he either killed the fellow after they got into the air—or the fellow succumbed, like the rest, to the poison. Anyway, Torgler must have thrown his body out—but failed to note that the tell-tale badge had been left behind.

"Then when that devil spotted my Hellion from his Savoia, he lured me in with his fake S.O.S. just to get my ship for himself. And he was willing to sacrifice his Savoia to get it."

But now Crash heard the sound of rumbling motors and the scream of props overhead. The remaining eight Fairey Battles were now circling the field, their landing lights pronging out from the leading edges of the wings like giant antenna of some mysterious insects.

"Now what?" Crash growled.

Frankly, he had no idea what he could do. They no doubt intended to land for bombs, but he had no hope of overcoming the lot single-handed.

HE HURRIED OUTSIDE and took up a position in the shadows of the hutments and watched. The planes seemed to be still circling the field, uncertain in their movements, and Crash sensed that Torgver was now in frantic communication with them by radio from the armored car.

"Why in the name of Satan didn't I smash that set before I left him?" Crash grunted, watching them circle again. "But how did I know that guy was a Houdini and would get away that quick?"

He hurried through the shadows, tried the No. 2 hangar. He entered a side door and stiffened—for there gleaming in the dull glow of a light in a metal guard frame was a Battle bomber—standing all alone. Two Aircraftsmen, stiff and stark, lay on their faces under the wings.

"Wow," exclaimed Crash. "That explains the eleven ships of that formation. This one didn't get off—for some reason. Maybe I can get away with it."

He ran to the doors of the hangar and began the arduous job of rolling the door sections back alone. He tugged, sweated, and pulled until he had enough of the panels open. Then he tore back inside and muttered a prayer as he clambered into the Battle and pressed the Eclipse starter of its Rolls Royce "Merlin" engine. He had no idea whether the bus was in flying shape, but he had to take that chance. He ran it out into the darkness, let it warm up slowly, hoping that the dead men had completed whatever repairs they had started.

Over the unfamiliar field he roared her, then let her take off gently, climbing gradually over the far end of the drome. Finally, he swung off to the east, still watching the other Battles circling the field and hoping they would stay there until he could return at their height and induce them to come down.

The Battle behaved splendidly, but Crash saw that she had very little fuel aboard. She had evidently been held back because of some last-minute adjustment. Whatever it was—Crash now figured it had been taken care of, but she had not been run outside to fill her tanks.

"Got to act fast, baby," he said to himself. "This boiler will sniff up those few gallons in no time."

He climbed her hard now and then turned back toward the field. He still wore his purloined Arab garb, and he hoped to make the most of it. He came up to the circling Battles in a

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few minutes, then went through a mad pantomime of pointing down to the earth.

The pilots and gunners of the captured Battles saw him and jerked in their seats as they spotted his head-dress. Could this be their leader? Yes, their leader wore such a head-dress and he had sent for a Battle to return and pick him up. But their leader had just been in radio communication with them a few minutes before. Could he have got here this soon?

Meantime, Crash kept darting in and out, signalling wildly for them to follow him down. And at last they eased in behind him. Yet Carringer was not yet quite sure. He sat drawn and tense expecting a burst of gun slugs to rip his back out.

But nothing happened.

So playing the game for what it was worth, he ran the Battle into position for a landing and let her ride in again to thump and bump over the hard packed ground. He snapped off the landing lights after she'd rolled to a stop inside the hangar, then climbed out and hurried to the shadows of the great doors.

A Battle was coming in slowly. He huddled down, watched the ship land, and saw the anxious faces of the two men in the cockpits. They were hard-faced Europeans.

"I hope you're the leader," Crash said under his breath, as he eyed the pilot. "Get the leader out of the play and I'll bet you'll go all to pieces."

The Battle came to a stop and the two airmen clambered out with a look of inquiry in their eyes. They stood near the wing root uncertain as to what to do next. Another Battle was now coming in, its landing lights spattering out white beams as it dropped its wheels on the hard ground. The first two men ran over to meet their comrades and to gain the confidence of numbers.

They spoke to one another, gesticulated. Then the four of them came cautiously inside the hangar and clambered up on the wing-root of the Battle Crash had just flown in. Crash now acted fast. Stepping into the glow of the lone lamp, he raised two British Webleys and spoke with authority:

"Fine! Now get down off there and walk together. Over there to that door!"

They all turned and let out low curses. At first, they made no move to obey. But a shot dead center between the two central figures made them liven up and climb off the wing-root. They huddled together, and Crash thereupon herded them toward a bomb and ammunition chamber at one side of the hangar.

"Here's a quiet and very solid concrete cell, gentlemen. You will be very comfortable in it, I'm sure. You'll find a lot of bombs inside, too—which is just what you came for, eh? But if you get careless with them, you won't live to complain about it."

Forthwith, Crash shoved them, and they went thumping down the wooden entrance steps with guttural curses. Crash thereupon slammed the door of the bomb-dugout and shoved the heavy twist-bar around to make certain they were secure. Next, he darted outside to watch the third Battle taxi up, but this time there was to be trouble. He sensed it at once.

The Battle, which had landed while Crash was imprisoning the first group, had suddenly turned at right angles to the hangar, and Crash knew they had "smelled a rat." The plane's hatchway was now slammed back and shouts went up—shouts to which naturally there was no reply.

Then, before Crash could do anything about it, the pilot yanked out a signal pistol and fired a red signal light which rocketed up into the sky to give the show away.

Crash quickly fired twice with his Webleys and the signal pistol fell to the tarmac in front of the hangar. The observer then tried to get up and deliver a burst from his rear Lewis gun, but Carringer's Webleys spoke again and the unfortunate gunner fell over his gun drum with a scream and his dying reflex action pulled the trigger and poured a splashing burst of fire deep into the tarmac. Ricochetting slugs spanged all over the hangar, made Crash huddle close to the great doors until the drum was empty.

The wounded pilot tried hard to get the Battle away again at this point, but another shot from Carringer's gun stopped him cold and the plane rammed its nose into the steel girder that supported the corner of the hangar.

"Damaged it a bit," mooned Crash. "But she's probably still in fair shape."

The fourth Battle, which had started to land, now zoomed over the hangar with a dull roar and Crash could see its observer leaning over the side trying to make out what had happened.

Carringer knew there was no time to lose now.

THE RENEGADES had started out with eleven Battles, Crash figured. Three had gone down in the desert battle after Crash had taken over the Hellion again. Three more were on the ground here. That left at least five upstairs somewhere. To be sure, they had no bombs—but they still had plenty of guns. And that meant that the American's only recourse now was to go aloft and challenge them. For the signal pistol had put the kabosh on any further deception by Crash involving his Arab masquerade.

He skirted the hangars and raced along to where he had left the Hellion. The remaining Battles were still circling the field, uncertain as to what measures to take. And now Carringer realized that at any minute Torgler would turn up aboard the armored car.

"Cripes! That guy's arrival may ruin everything," Carringer panted as he reached the Hellion. "But I've got an idea."

He clambered aboard, roared down the field, and hoiked her clear. Then he saw why the Battles were still circling the field. Ahead were the dancing headlights of the oncoming Lanchester. And there was another light—a signal beam—gleaming directly upward from a small searchlight mounted on its roof. Torgler was taking command!

The armored car was coming on at breakneck speed now, but Crash allowed a smug glint to warm his expression. He fingered for the controls of his heavy caliber weapons. Then suddenly he swooped down on the racing Lanchester.

Torgler never knew what hit him. He had been too intent on driving at headlong speed for the air station. But Fate was quick. The guns of the Hellion spanged out with loud bellows of wrath. Slugs weighing half a pound each into the front of the speeding war car slashed the heavy-duty tires from their rims. The armored machine bounced, fought to get her head, hit a sand dune, then rolled over on her back with a belch of smoke and burst into flames. As Carringer banked over the wreckage, he could see that she had carved a wide gash fully thirty yards long out of the ridge of sand into which she had hurtled.

He circled tight, his wingtip almost pivoting on a dune, and peered down. But there was no sign of life among the flaming ruins of the smashed armored car. "That's the last chapter, Torgler," he muttered. "You sure gave it a whirl, but you got all that was coming to you. You sure handed out—and in the same fashion, you had to take it."

Now he lunged back at the Battles—but they were gone! The air was empty! Mystified, he brought the Hellion high over the field again. And therein lay his undoing; for no sooner did he spot them, when his engine cut out. He was out of gas! His Hellion was falling toward the Ramleh tarmac—and there, below, were the Battles, lined up!

Crash knew he was in for it, but he had to carry on. Skillfully, he brought the Hale plane in dead-stick, rolled to a stop, and jumped out, a pistol in each hand. Yet there was no one to oppose him. He could not understand.

Slowly, he advanced, entered the hangar—and a sight met his eyes. Another of the renegades had taken command, had released the imprisoned men. The whole group was frantically engaged in bringing out a load of bombs. His engine cut out, they

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had not heard him come in. At any rate, they had discounted his single-handed opposition in their haste to lay hands on the explosive "eggs."

Crash Carringer brazenly stepped forward, his Webleys raised menacingly. "Mitts in the air, everyone of you!" he shouted commandingly. "I'll plug any man who makes a wrong move."

The men turned, surprised. Then there came a snarl from their new leader: "Rush him! We shall not let one man curb us. The man who gets this devil will be second in command."

Crash tightened his grip on his triggers. The men were moving forward, determined. One tried to circle him, and the American fired, brought him down. But the rest still edged upon him.

Then they charged! "CRACK! CRACK!" went his Webleys, and two more fell, clutching their stomachs. But Crash knew he couldn't hold out. There were still eleven men in that murderous gang. Another second, and—

But abruptly the renegades stopped short, cursed, slowly raised their hands. What had happened? Carringer wheeled.

There, behind him in the doorway of the hangar, were three British armored cars—and the muzzles of their turret guns were trained ready to wipe out the opposition in a single volley!

Now, a grinning Scotch wireless

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1 1/2 sq.	8 for 5c	1/2 sq.	2 20c	Can 25c, tube 10c	SXAE700il, 2oz 15c	1/16 35c. 1/2-	80c. 3/16-85c	1/16 1/2-85c	1/16 1/2-85c	2 1/2, 2 1/2, 2 1/2 60c	2 1/2, 2 1/2, 2 1/2 60c
1 1/2 sq.	8 for 5c	1/2 sq.	2 20c	PROF. BLOCKS	Shaust Manfid	3/16 35c. 1/2-	80c. 3/16-85c	1/16 1/2-85c	1/16 1/2-85c	Gas Mod. 2 1/2 90c	Gas Mod. 2 1/2 90c
1 1/2 sq.	8 for 5c	1/2 sq.	2 20c	1 1/2 x 1/2 5-7-5c	nickel-plated p.p.	3/16 35c. 1/2-	80c. 3/16-85c	1/16 1/2-85c	1/16 1/2-85c	3 1/2 1.50, 3 1/2 2.75	3 1/2 1.50, 3 1/2 2.75
1 1/2 sq.	8 for 5c	1/2 sq.	2 20c	1 1/2 x 1/2 6-8-5c	Rowen, Bunch, 85c	3/16 35c. 1/2-	80c. 3/16-85c	1/16 1/2-85c	1/16 1/2-85c	4 1/2 2.75, 4 1/2 4.00	4 1/2 2.75, 4 1/2 4.00
1 1/2 sq.	8 for 5c	1/2 sq.	2 20c	1 1/2 x 1/2 10-2-5c	Condensers .20c	3/16 35c. 1/2-	80c. 3/16-85c	1/16 1/2-85c	1/16 1/2-85c	MICROFILM	1 oz. 9c 2 oz. 15c
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1 1/2 sq.	8 for 5c	1/2 sq.	2 20c	1 1/2 x 1/2 27 6c ea.	1 1/2-4, 5c	3/16 35c. 1/2-	80c. 3/16-85c	1/16 1/2-85c	1/16 1/2-85c	Prop. Shaft, doz.	8m. 9c Lge. 10c
1 1/2 sq.	8 for 5c	1/2 sq.	2 20c	1 1/2 x 1/2 30 6c ea.	Pkg. 100 1/2 5c	3/16 35c. 1/2-	80c. 3/16-85c	1/16 1/2-85c	1/16 1/2-85c	8m. 9c Lge. 10c	8m. 9c Lge. 10c

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On the Light Plane Tarmac

(Continued from page 21)

experience has to be taken from the man-on-the-ground's viewpoint. But for that reason I feel it is all the more pertinent.

To begin with, I live along the air route between Chicago and Kansas City.

Well, while walking through our pasture a short time ago, I heard a plane droning by and naturally I stopped to watch it pass. I was standing there, eyes up, when suddenly the plane tilted sharply and I saw the door of the cabin come open!

Then as I watched, wondering what had happened, I heard a distinct Plop about a hundred feet away. I had seen nothing fall, but I was curious. So I hurried to where the sound had come from. There I found the smashed remains of a very expensive camera, which made me all the more puzzled. It seemed like part of an aero adventure story one might read in FLYING ACES.

I picked up the wrecked camera and inspected it. Then I noticed that the plane had turned back and was coming in for a landing in our pasture. I watched it glide down, still wondering what it meant and what it was all about.

When it landed, I walked up to the plane and watched two men climb out. One was wiping perspiration from his forehead; he actually looked

man stepped from the leading Lancaster. "Hoot, and I'll report this capture to Commander Hovis immediately," he sang out.

"Wait a second," replied Crash Carringer. "Give me your spark key and let me report to him. You see, I have a little business to talk over with him. It's about an order for some Hellions."

like a fellow who'd had a gosh-awful nightmare. The other, the pilot, was likewise plenty nervous.

To cut a long story short, they told me that they had been flying low over the country taking pictures to try out the camera. One man had piloted the plane; the other had the camera—and in operating it he'd been leaning on the door while aiming the camera at the ground below.

Then, while he had been taking shots of the scenery, the door had suddenly snapped open! And he found himself starting to pitch headlong out of the plane—because he had forgotten to fasten the door securely and had not even buckled his belt! (Editor's Note—The writer does not say, but we assume the door was one of those fold-down affairs usually seen on planes of the Cub type.)

That fellow's carelessness while snapping pictures almost cost him his life. And the expression on his face told me he would never forget his spine-shivering experience.

Perhaps this letter will warn other camera-bugs to keep their safety belts fastened and above all make certain that the doors on their planes are secure during flight. Wanting some day to become a pilot myself, perhaps this letter will also add two dollars to my small savings toward



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The Red-Jap War Begins!

(Continued from page 19)

most up-to-date annuals on aviation don't appear to offer anything truly new since about 1933—and yet Japan has been building hundreds of planes and importing hundreds of planes, and there can be no question that the Japanese Army Air Service has flown thousands of war-time hours in the last two years.

THE LATEST EDITION of *Air Forces of the World* discloses that Japan has an Aichi Marine 92 three-seat fighter-bomber monoplane which may be something new. But since it is powered with only a 500-h.p. Hispano-Suiza, it cannot be much more than what we would call an advanced trainer. They also list the Ishikawajima T-3 which is new, but few details on its construction or performance are available. There are also five types of Kawanishi planes—from flying boats to single-seat fighters—but none seems to have anything more than 700-h.p. to pull it along. The Mitsubishi firm is building three distinct military models, yet they are the usual Junkers-type bomber monoplanes. Meanwhile, the old Nakajima firm seems to be still putting out its fighter biplanes, fighter seaplanes, and Type

91 fighter-monoplanes.

But if we know very little about Japan, how much do we actually know about Soviet Russia? The answer lies between "not much more" and "maybe not as much".

For months, the so-called aero writing experts have been playing the "How Many Planes?" game with Germany and Russia—particularly, of late, with Russia. Some say the U.S.S.R. has 9,000 first-line jobs. Others declare she does not have a decent handful of modern equipment. What Russia does have, however, is 50 percent of the world's available petroleum. We know that.

In 1925, the Russian Five Year Plan was started, which resulted in a Red Air Force of 1,000 fighting planes. In 1933, a second Five Year Plan was begun which had a goal of 7,000 fighting planes by 1939. It is now 1939, and according to the Soviet propaganda bureau of the Red Army, by 1940 they expect to have 1,500 military planes in eastern Siberia and along the borders of Manchukuo, and about 6,000 in Russia proper. These are, of course, Russian propaganda figures; they may be cut in half or doubled, depending on your own point of view. Or you can

take them just as they are.

From confidential sources abroad, we gather that Soviet Russia's aero status is somewhat below that of the other sky powers. For example, their 150 bombing squadrons seem to comprise only 450 jobs—which by simple arithmetic indicates only three planes to a squadron. Russia, of course, has developed the troop-carrying trick to a point where she can speed infantry across her wide expanses of territory.

In addition, the Reds have copied many of the accepted single-seaters of the other powers, and we find she's now building no less than 15 different types. They are both monoplanes and biplanes, the best appearing to be the J-16 fighter monoplane rated at 250-m.p.h. Another, the J-15, carries four machine guns at 225 m.p.h. And their J-7, listed as a "Curtiss type," is a fighter biplane in the 210 class.

But whatever the true Jap and Red figures may be, it's certainly obvious that they both have plenty of what it takes for a first-class air scrap. They're proving that today on the Outer Mongolia border. And as we've said before, you can darned well call it a *real* war.

C'est La Goat!

(Continued from page 12)

before he started nibbling. Phineas sat down and waited. "That ought to make us pals," he mused.

The goat apparently had eaten earlier that morning. When it had consumed half the turnip it made a noise that was suspiciously like a burp, then it picked the rest of the succulent root up in its masticators and ambled around the corner of an old shed. The Boonetown pilot followed, soon came upon Mr. Goat backing out from under a corn crib that had been built well off the ground to insure against the raid of rodents.

"Ma-a-a-a-a-a-a-a!"

"Shut up!" Phineas yipped. "Didn't I give you a tur—E-e-ek!" The goat had put its noggin down and was now chasing the flying jokesmith for half a mile across Frog real estate. Phineas finally fell over a fence, his bellows as flat as palm leaves.

"That is the maddest goat I ever saw," Phineas choked out. "But I'll fix his wagon yet. I'll square things with that tin-can glutton. I—er—wonder if—no, goats are not like that. But if he was brought up from a pup with a pooch—that is what I'll find out!"

Phineas returned later to find that Major Pingwoodie was going to be attached to the Ninth for quite some time. Bump Gillis hinted that Pingwoodie was on the trail of the Liepzig Leech, the Kaiser's most brainy moocher. So then Phineas resolved to be very nice to the Limey, as there were things he wanted to find out about von Krum. There was always a certain way to fight a big Ace. All of them had a weakness somewhere, just like Achilles and his heel.

Anyhow, Major Pingwoodie took to Phineas and expressed the wish that the Boonetown pilot accompany him to Bar-le-Duc that evening.

"Want you to meet a friend of mine, Lieutenant," Major Pingwoodie said. "Met her in Paris. Jolly girl and no end good to look at. Mignon Fillay of the Folies Begere! Arranged for her to meet her brother here who has three weeks leave—Albert Fillay, Colonel in the French army. We'll have a jolly time, Lieutenant."

"Huh?" Phineas said, his eyes popping. "A Frog Burlesque Queen, what, old thing? Tophole and ripping, I say, old custard. I must hurry and shave. Pip pip and cheerio!"

MIGNON FILLAY turned out to be a petite, ebony-locked made-moiselle with a pair of peepers of a violet hue as big as the bottoms of teacups. She held out her hand to Phineas and gurgled, "Ah, ze beeg strong man, *oui*?"

"H-Haw-w-w-w," Phineas laughed, his freckled face getting the color of a tomato. "I ain't so big an' strong. Garson, breeng champagne!"

Colonel Albert Fillay and Major Pingwoodie refused the fizzy giggle water, ordered brandy instead. They soon fell into earnest conversation, leaving Phineas and Mignon to get along as best they could.

Mignon was now shrinking violet, and after two glasses of joy juice, her pretty locks were brushing the Pinkham cheek and one arm had stolen around his neck. "Ah-h-h, *mon cheri*," she cooed. "Why have we nevair meet before *ce soir*, non? Mignon, she see beeg brav' offeesser *encore*, *oui*? When we can be jus' alone, *oui*?"

"H-Haw-w-w-w," Phineas managed to say. "I—er—huh—*vous* see I have ze—er—steady—an—"

BLA-A-A-A-AM! The door blew inward and bottles fell off the shelves

behind the bar. Then a big piece of plaster fell off the ceiling and conked a French officer on the pate. Above the echo of the blast sounded the hum of Boche aero power plants. WHA-A-A-ANGO! BL-LAM!

Mignon Fillay shrugged. She laughed at the men crawling out from under tables. "Voila! Such a fuss over notheeng. In Paree, ze bombs one gets use to them, oui."

"Er—you are a sport, awright," Phineas admitted. "I never saw no dame like you before—er—you and me speak the same lang—"

Something worse than a Gotha egg then dropped in on the Frog flesh pot. Into the oasis strode an angry female—and Phineas took only one gander at the storm in her peepers. "Babette!" he yelped. "L-Look, mawn cherry. I can explain. This is just a pal of Major Ping—"

"So! Snake in ze grass, oui? I look through ze window, an' what ees eet I see? Sacre! She have ze head on ze shoulder an' vous hold her hand!" And Babette made a spring, hands reaching for Phineas. But the Boone-town miracle man had tasted Babette's wrath more than once before. He vaulted the bar, crouched behind it, and saw Mignon become the object of Babette's pique. Mignon slumped in her seat, but yipped: "You want ze fight, oui? I like ze Lieutenant, also, and—"

"Oui?" Babette screamed. "Zen you weel have it ze fight. I pull out ze hair an' scratch eet ze eyes, you two-times two cheater. I—"

Albert Fillay grabbed Babette. Mignon suddenly whirled and ran for the great outdoors. "Peeg!" Babette yelled and hit Mignon's brother right on the nose. Major Pingwoodie tried to reason with Phineas' heartbeat and she grabbed him and almost scalped him.

Phineas, having seen enough, wriggled out through a window. He ran down a narrow warren and hid under a pile of old bread boxes in the rear of a Frog bakery. "Phew-w-w-w-w!" he sighed and listened to the whistles of M.P.s and *gendarmes*. "No wonder Mignon beat it. Babette is worse than Big Berthas. I wish Frog dames did not go for me like they do. Haw-w-w-w-w!"

A few minutes later, Phineas hailed the Ninth Pursuit Squadron car just outside of town. Major Pingwoodie was for letting Phineas walk home, but the Boonetown flyer defied him to try and knock him off the running board. "It was your fault, as you sicked that Frog dame on me, didn't you? I didn't ask her to make advances to me. Now Babette is sore at me an'—where did she go, huh?"

"Into the klink, blarst it," Pingwoodie snapped, "where she belongs. I was bloody well warned not to go anywhere with you, Pinkham. Lucky to get out of this mess alive, what?"

Later, Phineas sat on his cot reviewing the hectic events in Bar-le-Duc. He turned a deaf ear to Bump Gillis' questions, absently plucked a long dark hair from his tunic. "Boys,

she was a pippin," he grinned. "No wonder Babette was jealous. Didn't bat an eye when that bomb went off—but when Babette told her what she'd do to her, she—huh—I will put this hair into my trunk with that ear-ring from the dame in Paree and the pink garter from—"

"What dames see in you is beyond me," Bump snorted, then rolled over and went to sleep. Phineas held the dark hair up to the light, grinned smugly. "Casanova Pinkham, the top man with the females," he gloated.

In Chaumont, Allied tycoons haggled with the red tab, the protégé of the late Kitchener. The brass hat argued in return that it would take at least eight months to duplicate the plans eaten up by the Frog goat. "Of course there was a duplicate set," the Limey argued. "But they were burned when that Zeppelin made a direct hit with one of their eggs on my workshop in Colchester. I am on the verge of a breakdown, gentlemen. I don't believe I could ever make another set of plans, such as they were, without going balmy. Blast it all, and all that! Fancy—a goat—"

During this pow-wow, Phineas Pinkham was strolling near the Frog farm where the testy goat hived up. Phineas seemed to have difficulty in walking; he acted like a dough that had tramped forty kilometers without a stop. "Well, Clarence," Phineas said, spotting the horned watchdog, "I am now ready for you. Come on and fight like a ma—goat. I—"

The ruminant wasted no time. He charged Phineas with his throttle wide open. Phineas quickly turned, bent over, and braced himself. CLA-A-A-A-A-ANG! The goat bounced back ten feet, spun around three times, and blinked its eyes. Then it sat down against a stump of an apple tree and dropped into peaceful unconsciousness, a bump as big as a goose egg on its forehead.

"I guess that fixed you," Phineas sniffed, taking a big iron stove lid out of the seat of his pants. "Now I will look at your storehouse." He walked to the corn crib and wriggled under it. There he found the goat's larder, and he let his eyes run quickly over the bits of debris. Four tin-cans, a half-eaten cracker box, three old shoes that bore mute evidence of having been chewed on.

"I—I get it," Phineas grinned. "The Frog that owned this farm left in a hurry when the *guerre* got too close, an' Clarence had to get what mess he could by himself. I bet he was trained by a pooch to store stuff like this away. Now if I can only be lucky!"

Five minutes later, Lieutenant Pinkham walked past the addled goat, a beatific smile playing on his freckled face. "I know how you feel, Clarence," he said. "I've brought down fresh Krauts, too, who thought they was smart like you. I am sorry, as I am all out of aspirin. Adoo!"

Phineas paused once while cross-

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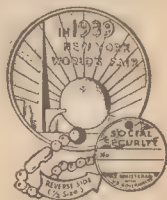
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ing a cow pasture. He kicked at a grassy mound, saw the most industrious insects in the world scatter far and wide like doughs under a heavy barrage from Krupps. "H-Huh, nature is wonderful. She made use of everythin," Phineas grinned and went on his way.

MAJOR PINGWOODIE was dropping down to the field when Phineas crashed the main entrance to Garrity's compound. The S.E.5 was a little unruly and Pingwoodie nearly stood it on its prop. The Limey Ace then got out of his pit and cussed out von Krum. "Fought with the blighter for a good half-hour until my guns jammed. Had him dead to rights, too. Ba-a-h! I'll get him yet. I missed him by a blooming hair this time—"

"Yeah?" cracked Phineas. "Well maybe I will get that bum if nobody else wants him, Pingwoodie."

"Ripping, what? Hark at him, haw! So will your awnt Minnie, Pinkham!"

"Awnt?" Phineas chuckled out. "Quite right, old thing. Awnts are quite handy, and all that, old cabbage. Odd beggar, von Krum. Call him the Cologne Killer, what? Chews on cookies while he fights, Liebkuchen they call them in Jerry. Had some once in Alsace, an' they are sure sweet. Honey in 'em, but there's no flies on von Krum, huh? Get it?"

"Er—aw—get what, Pinkham?" came back the disgusted Pingwoodie.

"Skip it," the Boonetown wonder laughed as he ambled to his Nissan.

Garrity sent for him five minutes later. He eyed Phineas solemnly when the trickster walked in. "Er—bad news, Pinkham," the C.O. said, "but somebody has to take the rap for the loss of those valuable papers. Buck passing, you know. Allied big-wigs have to have a goat. Er—didn't intend to joke, Pinkham. But I must have your word not to leave the confines of this drome."

"Yessir," Phineas said. "You have it. I always am a stickler for discipline, as you know. Bong sour."

"Now, why did he take it so easy?" the C.O. grumbled. "He—he knows somethin'. He—"

Just three hours later, a Spad roared across the field and Major Garrity knew he had issued no orders for a solo. He ran out on the field and saw Sergeant Casey picking himself up. Casey was holding his jaw in both hands when the C.O. got to him.

"Major," howled Casey. "He said just before he plastered me that you ain't got no squawk comin' as you did not say *when* he couldn't leave the drome. That crackpot! I was tunin' up Howell's bus, an'—"

"Assault, desertion — A.W.O.L.! Stealing Government property!" the Old Man said with relish. "Will I give him the works!"

NIGHT IN BAR-LE-DUC. Skull-duggery crawled through the murk, and it was in a nasty mood.

In a house on a side street, Phineas was unloading his cup of woe to his new found friends, Albert and Mignon Fillay. "Let 'em busht me," Phineas gushed. Six hookers of brandy had been given him and had been emptied. "I'll laugh at 'em, yesh. Like thish-haw-w-w-w-hic! I got in my pocket what whole Europe wantsh to get. Big fat env'lope, yesh. I laugh at 'em, ol' palsh of mine, huh? Hic!"

"*Oui, mon chéri,*" Mignon warbled. "Here now—*ici*. Just one more nize dreenk, *oui*?"

"You betcha-hic," Phineas said thickly, and he downed a husky snifter of brandy. Colonel Fillay went into another room and Phineas, his head dropping forward on his chest, thought he heard a rustle, like of a bird's wings. He sighed and closed his eyes. Then came the voice of Colonel Fillay, now back in the room—

"You are very smart, K-3. Look, I push his head this way—*und* that. Look, I lift his lids on his eyes and he does not moof. Goot! *Ach*, and I had heard *Leutnant* Pingham was smart."

"You forget vunce, Franz. Pingham has nefer tried to match wits with K-3 before. *Ach*, too easy, *ja*!"

"Here are the plans, the seals not even broken, *Fraulein*," Albert Fillay gloated, having just rifled Phineas' pocket. "The message is on its way to von Krum, *und* he is only eleven miles away. By midnight, the Baron will be landing in Chermayn with the plans of the British military genius, *nein*?"

Phineas lifted an eyelid. He waited for the payoff—some info about the spot where von Krum was to lift the plans. But nothing on that score was said. Even so, he gave himself a pat on the back for having prepared for such a contingency. If that crate of his was where he'd left it, there was still a chance to get the Baron. Phineas laughed to himself. He had verified his suspicions anent the Fillay family. Now to knock the pins from under them and nail von Krum to boot!

"The great *Leutnant* Pingham," Fillay spoke up. "We must take him with us, *Fraulein*. We must show the Baron proof that he is *kaput*. Von Krum's word is goot, *und* it means 40,000 marks for K-3. After the Baron sees him, *ve* vill shoot him—*ja, und* quickly."

Phineas lifted his eyelid again. Mignon was dabbing rouge on her kisser, and the Colonel from Hunland was preparing to leave. Mignon said, "This must go through without a hitch, Franz. Not yet can I leave France. There is a bombing squadron I must tend to."

Phineas began to wonder if he had been too much of a glutton, had tried to bite off more than he could chew. He had tagged the snoopers, could now knock them off. He knew the goat had not chewed up the plans. But he wanted to grab von Krum to round out the night's work.

"Now, *Fraulein*, we make him walk. Look, he moofs a liddle, *ja*?"

"Goot! The hypnotic drug is very handy, Franz. Get up, *Leutnant* Pingham *und* walk with us!"

Phineas rose slowly, eyes opening a little. He reeled as he minced toward K-3 and her stooge. "You are drunk, *Leutnant*. You come with us. Understand?"

"Maybe we should giff him more of the drug, *ja*?"

Mignon shook her head. "He has enough to keep him in a fog for *ein* or *drei* days, Franz. I haff used der same method before. Be still and let me handle der Yankee fool! Like a dachshund he do like I say. Walk, *Mein Freund*!"

Phineas walked downstairs and out of the house like a mechanical man. An M.P. out in the street took a gander at him and snickered, "That lootenant is sure scalded, huh?" Without another word, he sauntered on.

Phineas felt himself pushed into a car and he settled back against the cushions and made unintelligible sounds. Colonel Fillay, alias whoever-he-was, took the wheel. Phineas said to himself, "I am nutty to think it will work out right. Awnts, huh? An' I have got one named Minnie. I coulda knocked off these bums before, but I—oh, well."

Mignon finally gave a direction, whereupon the man at the wheel swung into a divergent road. "Ten miles beyond here you will see a crucifix at a crossroads, Franz. Stop in the dark of the woods right beyond. Von Krum will meet us there in fifteen minutes. We must hurry then and pass him the envelope."

"*Ja wohl, Fraulein!*"

Phineas put a hand inside his tunic, pulled out a second bulky envelope, muttered to himself: "Haw-w-w-w! F-fooled the bums . . . they g-got soap wrappers . . . ha-a-aw . . . like a decoy . . . H-Here, General—the real ones! I'll get a medal . . . h-huh?"

"*Gott!*" Mignon exploded and ripped her own bulky envelope open. Out of it tumbled gaudy printed soap certificates. "Ah, Franz, I almost make it the mistake—if this *dumkopf* had not—*ach*, more careful I should be after all—*Himmel!*"

Phineas suddenly sat up straight. "W-Where am I? I was dreamin' I was in Chaumont an'—I am kidnapped. You are spies I bet! I—"

Mignon yanked out a Luger just as Phineas uttered a wild yell and jumped. Crack! Crack! Crack! "*Ach*, at such a short distance I nefer miss. Franz, he vill be no more trouble. Now hurry, *Mein Freund!*"

Phineas waited until the U.S. jalopy was out of sight. Then he picked himself up and ducked into the bushes. "Haw-w-w-w-w-w-w, I am a dumb-cop huh? I guess they don't know I switched a Luger fulla blanks on-them. Le's see, the record for a mile is four minutes plus—an' I have to run two. That Frog road is bad an' they'll have to slow down.

Well, I will get them later if I miss von Krum. I still got the *real* plans anyway. Now if them little fellers find that little hole in the corner of the en—"

FIFTEEN MINUTES ELAPSED.
Phineas ran cross-country and reached the spot where he had left his Spad, and lo and behold there was not a soul in sight. He removed old dead tree limbs from its top wing and fuselage, then got the Hisso sputtering. "It—It'll take a few more minutes to get to that Kraut. I—er—well as I live and breathe I hear a Mercedes. It is von Krum! I hope Mignon didn't git bit yet. Well, it is a gamble, as what isn't in a *guerre*. It is maybe the most cock-eyed scheme a Pinkham—"

The prop spun and Phineas sprinted back to the pit to keep it turning over. Once in his office, he fed the Hisso plenty of petrol, taxied it around, then gave it full gun. "W-Well I timed them things," he said cryptically. "It took 'em about fifteen minutes to find that exit both times I worked on 'em. Well, here goes! Mignon will not figure it is me in this crate. Wonder how Clarence feels now—that stove-lid, haw-w-w! I am a goat, huh?"

Baron von Krum landed in the field just beyond. Then the auto arrived and Mignon ran out to meet his rolling Fokker D-7 and leaped up to the pit. "*Der tag, Herr Baron—der tag! Leutnant Pingham is dead!* Here are the plans of the British offensive!" Then she bade him goodbye and jumped clear. The Fokker D-7 picked up speed again as the Baron's reply washed back at K-3: "Goot, K-3! *Hoch der Kaiser!*"

Getting back to the car, K-3 suddenly looked toward the moon. "Franz, an *Amerikaner* plane *ist* coming! Quick, we must get away. Ha-a-a-ah, what Yangkee upstart thinks he can cope with von Krum in *der air? Der dunkopf—eek!*"

"Was *ist?*" cried Franz.
"Something it bites," Mignon yipped. "A mosquito, *Ja?*"

Baron von Krum zoomed upward, shoving the precious envelope inside the shirt that was next to his epidermis. But at 3000 feet he jerked in his pit, swore softly. "*Ach, der winter underwear in summer, bah!* But it is cold so high—!"

Phineas flew across the face of the moon and the Baron could not believe his peepers. "A Spad, *hein?* He thinks to cut me down? He's turning, *der* bumper! I show him how *der* Fokker idt can climb. Ho! Ho! *Der* fight you vant, *ja?* I'll—*Gott! Himmel! Donnervetter! Ach du lieber, der itches mitt stings. Ow-w-w-w-w!*"

Phineas saw the D-7 wobble a little in its upward crawl, saw the black casque covering the von Krum noggin moving around as if bobbing on the surface of a storm-swept sea. "Bite 'im!" Phineas yowled, then he dived toward the Baron. "Found the exit, all of you little bums, huh? Haw-w-w-w-w-w-w!" He swooped

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over the Fokker, bounded lead along its dorsal region. The Boche crate went into a fit.

"Ach! *Donnervetter!* All offer me is needles mit pins! *Gott!* Someth' it crawls up *der* neck!" The Baron writhed and dug desperately clawing fingers inside his flying wrappings. At the same time he tried to fly his plane and trip his guns.

Many crawling things were now on his sweat beaded patrician pan. They started jabbing up his big hooked nose, wriggled inside his leather casque, and strafed his ears. "Bugs!" von Krum howled. "*Himmel!*" All over inside my zoot. E-e-e-e-eek!"

Then he saw the Spad roaring down on his neck again, and frantically he back-sticked and executed a barrel roll at the top of his climb. Vickers lead seared along his empenage and he had to kick the Fokker out of a dizzy side-slip. Struts buckled and the top wing began to teeter. "A-A-Ach!"

"I bet I put five hundred ants in that big envelope!" Phineas laughed. "An' Mignon did not see me tear off a corner. Well, it was a fifty-to-one shot, but a Pinkham don't like sure things anyway. Ants, Baron! Awnts to Major Pingwoodie, and will he be surprised! Take that, you big tramp! Haw-w-w-w-w-w-w-w!"

The Baron could not fly, fight with

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his crate, and emulate a hula dancer with the hives all at one and the same time. Little red ants, angered at solitary confinement, were going to town on his epidermis. Once von Krum let both hands go to work on the tiny red attackers and the riddled Boche bus then threw a connip-tion fit and headed for the carpet end over end. By a miracle, the tortured Teuton got its nose up when the ground was not 800 feet away.

Baron von Krum battled it to a landing just a quarter of a mile from where he had met Mignon—and what a landing it was. Fokker parts were strewn around an area half a mile square—and Baron von Krum was left hanging from a tree limb nearly fifty feet from the carpet.

Phineas put his Spad down and walked over to what remained of the smeared Hun Fokker. He picked up an oil gauge, then tossed it away. "Well, I guess the von went west awright. I—er—what was that?"

"Ha-a-a-a-alp! Kamer-r-rad!"

Phineas looked up, saw the Kraut dangling. "Wee gates, Baron!" he yipped, "You will have to wait until I call the telephone company to get

you down, because—"

"CR-R-R-ACK!" The limb broke. The next branch down caught von Krum, held for a moment, then let him bounce down through the other branches to finally pancake in an old Frog garbage dump. Even then, the Baron was not too done in to resent the attack of the tiny red army.

ON THE DROME of the Ninth Pursuit Squadron, the pilots, with their distinguished guest, Major Pingwoodie, were having what is known in this day and age as a high party. Pingwoodie was outlining the plan of an air duel he hoped would be the end of Baron von Krum. Meanwhile, Bump Gillis, Captain Howell, and three other buzzards were speculating over cognac as to the fate of Phineas in the event of his capture by the A.E.F. strong arm squad.

"He will at least get life," Bump said, "even if he confesses right away. Well, I don't know what kept him out of a U.S. klink this long, unless—well, I think he was goin' screwy all right. He had some ants in a big jar, an' he asks me how long

I think one can live without air. Ya know, they can't convict a cuckoo, as—"

"Tention!" came a cry. Then Major Rufus Garrity strode in shaking his head as if he disagreed with somebody. "Ah—er—report come in from Vaubecourt," he muttered in punch drunk fashion. "Baron von Krum—shot down an hour ago by a bat flyer. Patrol of Yanks found von Krum tied to a tree near the wreck of his Fokker. I—er—must—beg you to excuse me—I don't feel so good, m-men—"

"It is a lie!" Major Pingwoodie spouted. "Nobody but me could jolly well knock off von Krum. He must have crashed himself! Blarst it, what rotten luck and all that! I—"

H-R-R-R-RO-O-OM! came the roar of an aero engine. Pilots poured out of the Frog farmhouse. Ground-hogs already had a petrol flare going, and down into the big gob of light swooped a Spad.

Captain Howell yelped, "It's my bus! It was Pink—why—it is—he—look at him thumb his nose at me. Why—the—!"

The Old Man came running out. Phineas made the prettiest landing he ever had made on the drome of the Ninth. He jumped clear of the sky wagon and trotted over. "Bomb swat, Howell, I am back! Hello Major, old parsnip! You do not have to bother about the Baron any more. Haw-w-w-w-w!"

Major Rufus Garrity stood facing Phineas, arms akimbo. "Nice goin', you missing link! You brought down a Hun? Well! Well! But how about all those other charges? Causing the plans of Kitchener's—"

"Oh, I have them tucked away in my hut," Phineas sniffed. "They have been there for a day or two. I trailed Clarence the goat an' found he'd put 'em away in his icebox until he got hungry enough to eat 'em. It is funny if you bring up a goat with a pooch. Clarence was. There was an old dog kennel there, an'—"

"H-Huh?" Garrity's knees buckled. "Y-You mean you had those—why—why you crazy numbskull. Y-You—and you let everybody—! Go get 'em! What do you mean by—?"

"I had to have them to make duplicate envelopes from. I made two, as I wanted to snag K-3, the Liepzig Leech, at the same time as von Krum. I know where she—she is, too. She has been after the plans all the time. I fooled her with that hot water bottle and tube—the Mickey Finn she give me went into it, haw-w-w-w-w! She stole the fake envelope with the fake seals, then I made out she had the wrong one and she got the other one that was filled with old newspaper clippings—an' ants. Ants is right. Awnts to you, Major Pingwoodie. An' you better be thinking up some alibi, as who is K-3 but your little Folies Begere pal, Mignon Fillay. Her brother is named Franz, not Albert. You are some Intelligence officer. Haw-w-w-w!"

"Quick!" Major Garrity yelped,

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"I says to myself if I got ants next to von Krum, I would have the upper hand over the squarehead," Phineas went on. "It was a gamble though, as the ants might have got out of the little hole in the envelope before Mignon got to the Baron, an' then I would not have got the fathead. Thanks for groundin' me, as if you hadn't I might not have had a Spad out near Vaubecourt. Oh, I knew Mignon was a fake, as if she was not scared of a Gotha bomb, she would have put up a fight with Babette. But Babette was goin' to pull out her hair—an' I had a sample of one of them black hairs and instead of a root on it, there was a little chunk of cloth—and I knew it come out of a toupee, huh?"

"Nothin' you have said makes any sense," Garrity groaned. Then he jumped a foot off the ground. "K-3 is a dame who—who is not a dame?"

"Yeah," Phineas said. "We must hurry to Bar-le-Duc and catch Mignon, as she does not know it was me who shot von Krum down, so she'll still hang around to snoop some more. Also, notify the Frogs at Toul to arrest Colonel Albert Fillay, as he is a Kraut. Now let's get out the squad-car, huh?"

BAR-LE-DUC stirred restlessly at 1:30 in the morning. Gotha threats had Morpheus backed against the wall, so most of the inhabitants were very much awake. Babette sat in her window bemoaning the fickleness of the *genus homo* and cooking up revenge on Phineas Pinkham.

But Babette's big dark eyes suddenly widened—for she saw Mignon Fillay slip out into the street below and hurry across the cobbles. At the same time, a big U.S. boiler rounded a corner, and Babette heard a familiar voice that made the shutters near her swing back and forth. "There she is! Get 'er! After her—!" Babette saw Phineas jump clear of the jalopy, and then Mignon took a small Krupp out of her sleeve and let it blaze.

But there was a plantpot right beside Babette—and Phineas' light of love snatched it up and let it fly.

KLUNK! Crockery and dirt broke up against the noggin of Mignon. Her hat fell off and took her dark locks with it. K-3 pancaked, his bristly pate shining in the dim light from a street glimmer.

"That is a box of cigars for ya, mawn cherry!" Phineas tossed up toward Babette. "Bulls-eye! Haw-w-w-w-w-w-w!"

"Himmel!" the Liepzig Leech wailed and got to his feet like a two day drunk, "Der roof it falls—!"

"Thought I was dead, huh? An' you was still shootin' blanks, you sissy!" Phineas sneered. "There was three envelopes, Mignon. I had the real one in my Nisson hut all the time. Haw-w-w-w-w-w! An' that numbing nectar you fed me—it went into a hot water bottle. That envelope you give von Krum was filled up with little red ants, too. Well, you should have known you wasn't smart enough to trick a guy who makes up most of the tricks. Take him away, somebody. Here comes my loving French tooty fruity.

"Vous darleeng!" Babette gurgled and threw her arms around Phineas, "You forgivee *votre* sugair plum, *oui*? Nevair again weel I doubt *vous*, an'—"

"D-d-don't kiss me here!" Phineas floundered. "Why Babette—it is—right out in front of every—stop this minoot, comprenny? H-Huh, I was wise to Mignon all the time. K-3 should have known the real envelope would have had the mark of goats teeth on it—or should he?"

TWENTY-FOUR HOURS LATER, a binge was underway at the Ninth Pursuit Squadron. Frog, Limey, and Yank brass hats were fraternizing with the pilots, and everyone was mellow with drink.

Dinner was now being brought in, and a Brigadier vowed, "Nice of you, Colonel Boncouer, to bring such a tempting mess of rabbits. Cooked to melt in your mouth! A big treat, Colonel!"

"*Merci!*" came the answer. "I personally show ze cook how to make eet ze special sauce, *oui!*"

But hardly had the assemblage had one bite of the meat when Phineas came in from the kitchen holding some things in his hand. "Rabbit, huh?" he cracked. "Do rabbits have split hoofs like these? Like a goat? These were in the garbage can. An' here is the goat's tail I found there, too. I thought that rabbit tasted—why, I brought Clarence in here this A.M. for a pet. Where is he now? I ask y—"

Major Garrity's face turned green. "Ex-excuse me, gent-gentlemen. I—"

The Brigadier's face got more greener. And the Colonel's dial got still greener. Then there was a mad rush for the open door.

Phineas, however, simply sat back and laughed. "I didn't tell 'em I simply found Clarence had been run over by a truck. Boys, rabbit is sure swell! An' now for once I got all I can eat!"

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(Continued from page 45)

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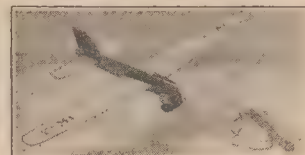
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An understanding of the behavior of the craft during the take-off will prove of value during the flight. With the engine revving at about $\frac{3}{4}$ normal, release the ship, running along beside it. Guide it if necessary by lightly tapping the wing tip.

The take-off run is usually about

12 feet, so have no fear that you're in for a cross-country sprint each time "Petrel" takes-off—for you're not! You will be, however, if you don't watch the setting on the timer.

You will also be due for a cross-country trek if you launch the craft with the tank pretty-well full, for this little gas birdie just aches to stay in the air. But if you don't heed this warning and your model disappears into thin air, don't write to us and kick. We suggest you look for it around New England way. Yep, we think that's where most all the "Petrels" hang out!

Build Our Cub "Coupe"

(Continued from page 33)

The fuselage should be covered on one side at a time, with the grain running from top to bottom and side to side. Cover the wing in halves, with the grain of the tissue running lengthwise. Remember, this must be done carefully! There is no reason for even beginners to have a covering job that looks like a nickelodeon paper-hanging.

When all parts have been covered, spray each with a fine mist of water. Coat each part with two coats of clear dope. A very light coating is recommended for the tail surfaces of the model.

Add the fuselage stripe and control markings with a ruler and pen. Assembly is comparatively easy, but follow plan dimensions exactly. Touch up any rough spots and add the last details.

FLYING

THE POWER consists of six strands of rubber, which are strung through the fuselage with a wire hook. A wire loop on the front of the prop makes it much simpler to "charge" the motor with a winder. Lubricate the rubber with shampoo or shaving cream.

Of course, every modeler should have a folding plot of long grass as standard equipment in his workbook for gliding tests. But since these plots aren't available, we'll have to get along out in the field.

The Coupe, because of its long moment arm and short nose is apt to be a bit tail heavy. But if you're not skimpy in building the landing gear and nose and use a heavy prop, the balance will be about right. If your ship glides perfectly flat but does a series of stalls and dives under power, the best remedy is to add down thrust. This may be done by putting a sliver of wood under the top of the nose plug so that the prop's "pull" is slightly downward. Any tendency toward spiral diving should be corrected by opposite rudder. In any case, do not add weight unless absolutely necessary. When she flies and glides perfectly, wind her to full capacity—and the sky's the limit!

But on second thought the sky's not the limit, after all! Rush right

into the house and get the trusty old Kodak and snap a couple of shots of your spiffy bus right on the runway. Be sure you get 'em up close enough to include all of those scrumptious details and have a contrasting background. And if you have a yellow Coupe, good old Mother Nature has given you a perfect backdrop in the form of the front lawn.

When you get the snap back from the corner drug store, send a couple of the best ones to F.A.'s Model Editor. He'll be tickled pink to get them!

And if any of you fellows have any trouble building or flying the Coupe, drop me a line, in care of FLYING ACES, enclosing a stamped self addressed envelope and a note explaining the difficulty. Even if you haven't any trouble, drop me a line anyway telling me how she flies. I guarantee an answer to everyone!

Answers

TO QUESTIONS ON PAGE 30

- 1—The angle of incidence is the acute angle the chord of a wing surface makes with the ship's line of thrust.
- 2—Selfridge Field is located at Mount Clemens, Mich., about 25 miles north of Detroit.
- 3—Information concerning the Army Air Corps may be obtained through the office of the Adjutant-General, U. S. Army, Washington, D. C.
- 4—The most important qualification of an airline hostess is that she possess a Registered Nurse's certificate.
- 5—Fred T. Jane was the original editor of the famous aeronautical volume, *All the World's Aircraft*. It is now edited by C. G. Grey.
- 6—A kharif is an intermittent but severe dust storm occurring between May and September in Somaliland. No, airmen don't like kharifs.
- 7—A jettison gear is a special valve arrangement for the rapid discharge of fuel in an emergency.
- 8—An opposed-piston engine is an engine in which the compression is effected by two pistons in the same cylinder acting in opposition.
- 9—The motion of a fluid past an obstacle in which no abrupt changes in direction or closed curves are noted is said to be streamline. To streamline a body is to give it such shape that its head resistance is lessened so that particles move back in a smooth path and produce the least amount of eddy-motion.
- 10—Only 19 British airmen were awarded the Victoria Cross during the World War.

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I will award it to my pupil who makes the most improvement in his development within the next three months.

I was once a skinny weakling of 97 lbs. I didn't know what real health or strength were. I was afraid to fight, ashamed to be seen in a swimming suit.

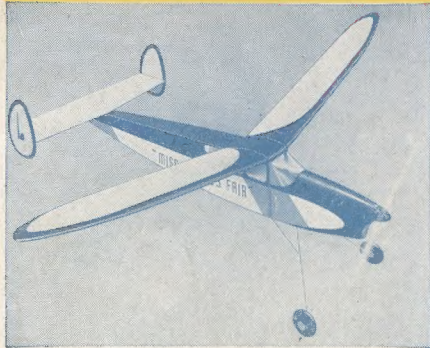
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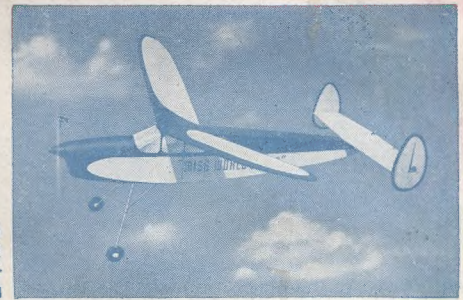


WORLD'S FAIR Sensational FLYING MODELS

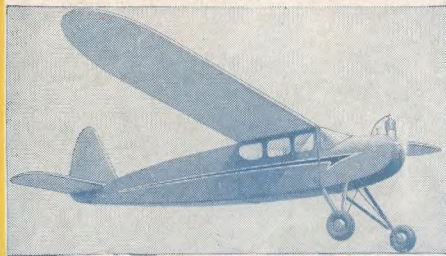
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DE LUXE KIT: Complete as above, plus the addition of yellow, blue and gold Scientific Dope and a pair of 3 1/2" pneumatic rubber wheels (in place of balsa wheels). AT YOUR DEALER .. **\$6.95**

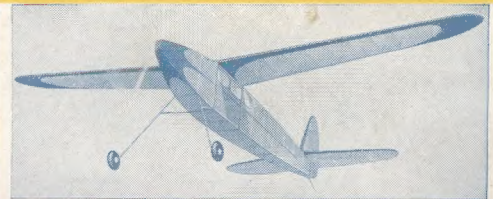


For Small Gas Engines

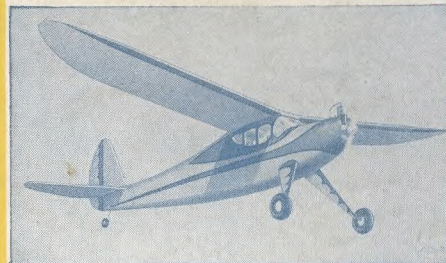


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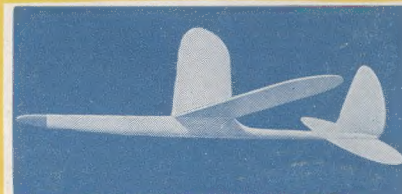


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Over 200 ft. with one winding is what the FLYING YANKEE will do. Then a glide, that will fill you with pride. 20" wingspan. Rapid fire plans will surprise you.

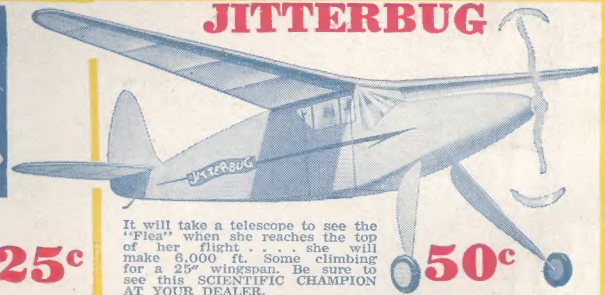
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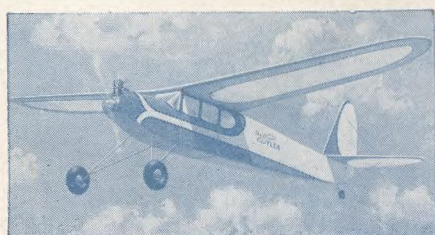
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